

THE CULTIVATOR.

NEW

"TO IMPROVE THE SOIL AND MIND."

SERIES

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No. 11.

MAKING AND SAVING MANURE.

MESSRS. EDITORS—In looking over the back volumes of the *Cultivator*, my attention was caught by the remarks of two distinguished individuals, appended below, and upon which you then made some valuable observations. As the subject is one of vital importance to the farmer, and one upon which there should be "line upon line," I shall make a few observations, the result of my own individual experience.

AUTHUR YOUNG said, many years ago, "he who is within scent of a dung-hill, smells that which his crop would have eaten if he would have permitted it."

Sir HUMPHRY DAVY demonstrated this.—He says, "I placed a quantity of fermenting manure in a retort, and ascertained that it gave off a liquid containing a large proportion of salts of ammonia. Seeing this result, I introduced the beak of another retort, filled with similar manure, under the roots of some grass in the garden, and in less than a fortnight a very distinct effect was produced on the grass upon the spot exposed to the influence of the matter disengaged in fermentation; it grew with much more luxuriance than the grass in any other part of the garden."

There are many substances on every farm, which, while in themselves enriching, may be profitably mixed with the manure to absorb and retain these volatile portions which arise from the process of fermentation.

The first material I shall name, is swamp muck. It may be truly said, that the farmer who owns a muck hole of good quality, and knows how to use it, is possessed of a mine of wealth which will surely render his farm productive and profitable. I speak advisedly upon this subject, having used the article for several years in every variety of form. I say, without fear of argument or contradiction, that a compost, properly made, of two loads of muck to one of good, fresh manure, is equal, in its effects on gravelly or sandy soils, load for load, to green manure.

In order to manage muck to the best advantage, the farmer should so contrive matters as to get a year ahead with his manure, so as not to be obliged to use it until his compost is fully ripened. In my opinion, formed from repeated trials, the noxious acids must be fully expelled from the muck by age and fermentation, to reap full benefit from its application to the soil.

August and September are generally the most favorable months for digging muck. First, then, the swamps should be *thoroughly drained*—there should be no half way work here, for the benefit to be derived from it will fully warrant the undertaking, even if considerable expense is necessary. When drained, commence carting the muck to a suitable and dry spot on the field where it is to be used. Lay the cart loads of it in two rows, as long as the heap is to be when finished, with

a space say of six or eight feet between. First spread down of the muck on each side, into the space between, a layer, ten or twelve inches thick, and then haul on the manure from the windows, driving up to the ends of this bed, and throwing in from the cart on to it a layer, say eight inches thick, of manure—the workmen should not drive on to the bed and tip up the cart, to save labor, for reasons presently to be given—another layer of muck, shovelled on from each side, and then manure, using two loads of muck to one of manure, and so on until the heap reaches about five feet in height, the last covering being of muck. Care should be taken to lay the compost up as lightly as possible, in order to secure perfect fermentation. The team should not be driven up on to it, as we have seen farmers do, nor should even the workmen tread on it.—For the same reason the heap should not be built too high, as the pressure upon the bottom courses will be so great as to prevent their rotting down thoroughly.

The compost gets into a general heat sooner or later, after it is made up, according to the weather or season of the year. It is proper here to remark that the summer months are most favorable for making up the heaps, although they may be made up as late as November. In this case, however, a greater proportion of manure must be used, and the heaps will need to be shovelled over the next April to fit them for spring crops. I have also composted muck both with lime and ashes, when the quantity of dressing for my land was not sufficient from my muck and manure compost. Last season I made a compost of sixty one-half cords of muck, and six casks of lime, seven bushels to the cask, and applied it to a field of ten acres of corn, using the manure compost as far as it would go, and then the lime and muck. The corn compared favorably, on the part of the field dressed with the lime and muck, to that where manure and muck was used; the whole field averaging a little better than sixty bushels per acre. I have also found that five or six bushels of ashes to a half cord of muck, makes a compost equal to either of the others. A load of leached ashes to six loads of muck, is also a good compost for sandy land.

In applying these composts to the soil, I have found, after trying it by spreading on to the grass ground, before breaking up and turning it under the whole depth of the furrow, and also by spreading on top of the furrow, and harrowing it in, that neither way was best. It is difficult to bury thirty or forty loads per acre sufficiently with the harrow, and turning it down to the bottom is too deep. I therefore do my breaking up late in the fall—say in November. The frosts of winter completely pulverise the surface, and kill the grass

roots, so that in the spring I have a clean bed to work upon. The compost is then spread, thirty to forty loads per acre, and harrowed first, and then covered three to four inches with the plow. This I can easily do, as I always break up my grass land from six to nine inches deep, varying with the quality of the land. By this mode of practice, my corn crops always average as high as sixty bushels per acre, and on my best land sometimes as high as eighty bushels.

Having now given my experience with composts, I have something to say of the barn-yard. And by the way, Messrs. Editors, how many yards you will see upon a side hill, with perhaps a brook running by or near the lower side, where all the cream of the yard runs to, benefitting nobody knows who. Instead of this kind of management, the yard should be made considerably dishing towards the centre and the sides will then be dry to walk around. A good supply of muck should be hauled to the yard in August or September, where, if the yard is *shaped right*, it will absorb all the liquids and wash of the higher parts, and retain them until wanted. The yard should be cleaned out after haying the next season, and the contents laid up in square compact heaps on the field where wanted. The loads should not be tipped up, to save work, sprauling five or six loads over a quarter of an acre, exposing a needless surface to evaporation, but nicely laid up; the straw and stalk litter and the liquids of the yard among the muck, will ferment it strongly, and the next spring it will be a black, free mass, and spread like garden mould.

In addition to supplying the yard liberally with muck, a quantity of leaves may be gathered, late in the fall, and used for bedding the cattle. Some farmers, instead of this, lay the planks of the cattle stalls with an opening between them of about one-half inch, and so arranged as to be easily taken up. Two feet thick of

muck or loam, is put under the floor, and in the spring it is excellent manure.

The hog-pen is also an important help in making manure. Four or five hogs will make from April to December at least thirty loads of most excellent compost, if properly attended to. In fact it is a business which they seem fully to understand and appreciate. The hog yard should not be extended over too much ground, as there will be a loss by evaporation attending it. The yard should be in as small a compass as practicable, and two or three loads of materials put in at a time. As often as once a fortnight, holes should be made in the manure with an iron bar, and corn dropped into them. By attending to this operation, the hogs will work the compost over from top to bottom.

Every farm has not muck upon it, but every farm has something in the shape of enriching materials which may be profitably carted to the yards. Rich turf, thickly matted with grass roots, and dug about two inches deep, is an excellent material with which to cover a yard. The accumulation of leaves and vegetable mould in the hollows and at the foot of hills in woodlands—the accumulations by the sides of stone walls and fences in the lots, are also good. Every observing and enterprising farmer will find something on his farm, with which he may profitably increase his stock of manure.

I think that observation will fully justify me in the remark, that the farmers of New England might generally double the quantity of their manure heaps, without detriment to the quality, by attending to the collecting of those substances to be found on every farm, which, while enriching in themselves, absorb and retain much of the liquids and gases of the manure, which would otherwise run to waste.

F. HOLBROOK.

Brattleboro, Aug. 17, 1847.

ON COOKING FOOD FOR CATTLE.

WE are frequently asked whether the cooking of food for stock, by steam or otherwise, would be profitable. So far as regards feeding cattle, we are without any reliable experiments which have been made in this country to test this point. The subject has attracted much attention in England and Scotland, and the results of several experiments there made, have been recorded. These experiments seem mostly to lead to the conclusion, that though in some instances cooked food does produce a greater gain than the same amount of raw food, yet the advantage of the former is not sufficient to defray the expense. In feeding hogs, however, especially where grain of any kind is used, the advantage of cooking seems to be generally admitted. We are also inclined to think, that there may be an advantage in partially cooking some kinds of food for cattle—such as corn stalks, chaff, or straw, which by this means become more palatable, and the nutriment they contain rendered more soluble, and more easily assimilated. The whole subject of feeding animals, however, is one deserving of more thorough investigation than it has here received, and we would earnestly commend it to the attention of our agricultural societies. In the meantime, we submit the following extract from an article "on the Management of Live Stock in Scotland," published in the *London Farmer's Magazine*:

An important question regarding the feeding of cattle, and one in reference to which considerable diversity of opinion still prevails, is whether cooked or uncooked food is the most profitable. The determina-

tion of this question has been made the subject of careful experiments by eminent farmers north of the Tweed, and I shall now give an epitome of the results obtained, and the conclusions arrived at.

Mr. BOSWELL, of Kincausie, in Kincairdineshire, experimented on ten Aberdeenshire horned cattle, very like one another, and their food consisted of the Aberdeen yellow bullock turneps and potatoes. The five put on raw food weighed alive 228 stones 11 lbs., and the other five on cooked food 224 stones 6 lbs. When slaughtered, the butcher considered both beef and tallow to be perfectly alike. Those fed on raw food cost £32 2s. 1d., and those on cooked, £34 5s. 10d., leaving a balance of expense of £2 3s. 9d. in favor of the former. Mr. BOSWELL mentions that the lot on raw food consumed more than those on steamed, and that when raw turneps and potatoes were put into the stall at the same time, the potatoes were always eaten up before a turnep was tasted; while, on the other hand, steamed turneps were eaten in preference to steamed potatoes. The conclusion arrived at by Mr. BOSWELL is, that it is unprofitable to feed cattle on cooked food. "It appears," he says, "that it is not worth the trouble and expense of preparation to feed cattle on boiled or steamed food; as although there is a saving in food, it is counterbalanced by the cost of fuel and labor, and could only be gone into profitably where food is very high in price, and coal very low."*

The above results, regarding the unprofitableness of cooked food, have been corroborated by the experiments

* Prize Essays of the Highland and Agricultural Society.

of Mr. WALKER, of Ferrygate, in East Lothian. He selected in February six heifers that had been on turneps, and were advancing in condition, and divided them into two lots of three heifers each, and put one lot on raw food, and the other on steamed. The food consisted of as many swedes as they could eat, with 3 lbs. of bruised beans, and 20 lbs. of potatoes, half a stone of straw, and 2 oz. of salt, to each beast. The three ingredients were cooked by steaming, and the bruised beans were given to the lot on raw food at noon, and one-half of the potatoes in the morning, and the other half in the afternoon. It was soon discovered that the lot on the cooked food consumed more turneps than the other, the consumption being exactly 37 cwt. 16 lbs.; whilst, when eaten raw, it was only 25 cwt. 1 qr. 14 lbs.—the difference continued during the progress of the experiment for three months.

Stots [steers] were experimented on as well as heifers, there being two lots of two each. They also got as many Swedish turnips as they could eat; but had 30 lbs. of potatoes and 4½ lbs. of bruised beans, 2 oz. of salt, and half a stone of straw each, every day.

The cost of feeding each lot was as follows:

Three heifers on steamed food, for one week, £1 2s. 1½d., or 7s. 4½d. each.

Three heifers, on raw food, for one week, 16s. 3d., or 5s. 5d. each.

Two stots, on steamed food, for one week, 16s. ½d., or 8s. 6½d. each.

Two stots, on raw food, for 1 week, 13s. 6½d., or 6s. 9½d. each.

The following is a statement of the comparative profits on cooked and raw food:

	£.	s.	d.
Live weight of heifers when put to feed on steamed food, 74 st., equal to 42 st. 4 lbs. beef, at 5s. 6d. per st., sinking offal...	11	12	7
Cost of keep for 12 weeks 5 days, at 7s. 4½d. per week	4	19	0

Total cost..... 16 11 7

Live weight of the same heifers when finished feeding on steamed food, 90 st., equal to 50 st., 9 lbs., at 6s. 6d. per st., sinking offal	16	9	1½
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Loss on steamed food on each heifer.... 0 2 6½

Live weight of one heifer when up to feed on raw food, 74 st., equal to 42 st. 4 lbs. beef, at 5s. 6d. per st., sinking offal...

Cost of keep, 12 weeks 5 days, at 5s. 5d. per week	3	8	10½
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Total cost..... 15 1 5½

Live weight of the same heifer when finished feeding on raw food, 89 st. 3 lbs., equal to 50 st. 1 lb. of beef, at 6s. 6d. per st., sinking offal.....

Profit on raw food on each heifer..... 1 4 0

Live weight of one stot when put up to feed on steamed food, 84 st., equal to 50 st. 4 lbs., at 5s. 6d. per st., sinking offal.....

Cost of keep for 12 weeks 5 days, at 8s. 6½d. per week	5	8	4
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Total cost..... 18 12 4

Live weight of the same stot after being fed on steamed food, 104 st. 7 lbs., equal to 56 st. 10 lbs., at 6s. 6d. per st., sinking offal.....

Profit on each stot on steamed food..... 0 3 8½

Live weight of one stot when put on raw food, 90 st., equal to 51 st. 6 lbs., at 5s. 6d. per st., sinking offal.....

Cost of keep for 12 weeks 5 days, at 6s. 9½d. per week	4	6	1
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Total cost..... 18 8 11½

Live weight of the same stot after being fed on raw food, 106 st. 7 lbs., equal to 58 st. 6 lbs., at 6s. 6d. per st., sinking offal.....

Profit on each stot on raw food..... 0 10 10

The following table shows the progress in condition made by the cattle experimented on:

Cattle.	Average live weight of three at commencement of feeding.	Average live weight of three at end of feeding.	Average increase of live weight in three months.	Average dead weight of beef.	Average weight of tallow.	Average weight of hide.	Average weight of offal.
	st.	st. lbs.	st. lbs.	st. lbs.	st. lbs.	st. lbs.	st. lbs.
Heifers on steamed food.	74	90 0	16 0	50 0	7 11	3 12	26 9
Heifers on raw food....	74	89 3	15 0	50 1	8 4	4 4	26 10
Stots on steamed food...	84	103 4	19 0	56 19	8 11	5 12	28 3
Stots on raw food.....	90	106 5	15 0	58 6	8 8	5 4	30 4

The conclusion which Mr. WALKER draws from his experiments is the following:

"We have no hesitation in saying that, in every respect, the advantage is in favor of feeding with raw food. But it is worthy of remark, that the difference in the consumption of food arises on turneps alone: we would therefore recommend every person wishing to feed cattle on steamed food, to use potatoes or any other food that would not lose bulk and weight in the steaming process; as there is no question but in doing so they would be brought much nearer to each other in the article of expense of keep. Upon the whole, we freely give it as our opinion, that steaming food for cattle will never be attended with beneficial results under any circumstances whatever, because it requires a more watchful and vigilant superintendence during the

whole process than can ever be delegated to the common run of servants, to bring the cattle on steamed food even upon a footing of equality, far less a superiority, to those fed on raw food."†

Mr. HOWDEN, of Lawhead, in East Lothian, obtained similar results from his experiments, which were conducted with a view of ascertaining whether cooked or uncooked food is the more profitable in the feeding of cattle. He found the preparation of the food by steaming any thing but profitable. The cost of preparing the food in his case was, however, considerable, as an expense of about ten shillings each animal was incurred by the practice. A single horse load of coals, carriage included, cost ten shillings; and exactly six cart loads were required and used in preparing the food

† Prize Essays of the Highland and Agricultural Society.

for the cattle, equal to 6s. 8d. each, and probably as much more would not be an over estimate for the additional labor in three months. According to Mr. HOWDEN's experience, it seems that steaming renders taint-

ed turnips somewhat palatable, while it has a contrary effect on tainted potatoes; the cattle preferring these raw. Turneps require a longer time to steam, and lose 1-8th or 1-10th more of their weight than potatoes.

A VISIT TO THE REAL SCHÜLE [PRACTICAL SCHOOL] IN GIESSEN.

(From the Journal of a Chemical Student—Spring of 1845.—Communicated to "The Cultivator.")

A FEW days since the annual examination of the pupils took place in the presence of the government commissioners, a few patrons, and gentlemen from out of town. It was conducted in the school building, which is a plain wood and brick structure, at the bottom of a shallow court, looking out upon one of the most quiet and unfrequented streets in the city. So far as retirement and stillness are concerned, no situation in the whole town could be better. In other respects the new building about to be erected, will doubtless have more attractions—for about this are no trees, no pleasant grounds, no objects of art, and within, very little consideration of comfort is displayed in the structure and disposition of seats, desks, &c.

By invitation of one of the teachers, I was present. I entered a room on the second floor at 9 o'clock, just as the whole school rose to sing. They were led, or accompanied rather, by their teacher on the violin, and sustained three parts of a pleasant morning song, with much sweetness and great volume of voice. Upon counting those who did *not* sing, and making such an estimate as I might of the whole number, the proportion of the former to those who sung I found to be about as one to six or seven. Their ages varied from seven to sixteen years.

The seats were long benches, each of which, with the desk in front, was framed into a kind of moveable platform, so that the removal of a suite of desks would be attended with the transport of the corresponding seats. Arranged parallel to each other, each row of desks is the back of the seats in front. The floor is raised at the farther extreme, so that the desks and seats are upon an inclined plane, bringing all the pupils in full view of the director, as he is seated upon an elevated platform in one corner.

In the corner adjacent to that occupied by the director, is a large case containing models of mathematical forms. Around the walls, were great numbers of pencillings, india-ink drawings, crayon portraits, paintings in water colors; and, in full view of the class who usually occupy these seats, a series of plaster models of the ear, hand, foot, head, and a variety of designs in basso and alto relievo. From these I fancied some of the drawings had been made. Upon examining the drawings closely, I found them all bearing the stamp of instruction by a teacher who knew how to accomplish a given effect of light and shade with the fewest strokes of the pencil.

At the right of the director's desk, and in full front of the class, was the black-board, suspended by two rings from the wall, immediately behind. About the black-board, standing or sitting, were the teachers whose classes might be called up for examination during the day. First of all was the director, whose position is a little more than equivalent to that of a principal of a high school with us—then comes the teacher of Chemistry and Natural Philosophy—then of History—then of Moral Philosophy—then of Geometry, Trigonometry and Geometrical Projection—of Algebra, of French and English—of Music, of Geography—of Drawing—of Book-keeping, and of Penmanship.

At the close of the exercise in singing—with which

the day of study and recitation is regularly introduced—the pupils of the lower classes withdrew, leaving about sixty, and the examination in Moral Philosophy commenced. The instructor was a man gifted in exciting the interest of others in what he taught. All the pupils continuing in their seats, except when particularly singled out to reply to an inquiry, he commenced a kind of parenthetic lecture on the first principles of morality—coming always to a full pause where the expression embodying the thought was to be uttered. These pauses of the teacher were filled up by the pupils; and the examination, with little intervals of catechetical exercises, consisted in this dissertation, in which the teacher controlled the conjunctions and prepositions, while the pupils distributed the substantives, adjectives and verbs. It was exciting in a high degree, and at the conclusion of nearly three quarters of an hour, was taken up by the director, who pursued a little more rigid method, but none the less to the credit of the pupils.

This examination, at the suggestion of the director, gave place to that in Trigonometry. The teacher was probably inexperienced, and though I have no doubt honored the selection of the committee of examination as a man of acquisition, he lacked the gifts of readiness and grace in his instruction. He made his own diagrams, and performed all the solutions, instead of entrusting them to the pupils. The so drawn triangles were merely three lines intersecting each other, without limit of length; and the circles made each with two strokes of the chalk, a half circumference being allotted, in intention, to each stroke, were unfortunately no nearer circles, than the careless toss of two crescents would be likely to give. The characters he employed, purporting to be from the Greek and Roman alphabet, bore so little resemblance to the originals, that they were quite unintelligible. Altogether his class, though evidently composed of hard students, had to attribute their regard for mathematics to another circumstance than the charm of his mode of instruction. The geometrical drawings made by his class were exhibited. They consisted of planes, and solids, and projections of the simpler crystalline forms, all of which were exceedingly well done. I subsequently saw a suite of drawings of the steam engine models, belonging to the school, made by former pupils, which were quite faultless. The young artists are already architects or painters—one of them is now painting the interior of a church at Mayence.

Then came declamation in German and English. An extract from Childe Harold on the Rhine, was pronounced with unexpected excellency of emphasis and inflection. Then succeeded translations from German into English, of passages of which they were familiar, and of others which were new to them. They were thoroughly instructed, as I can testify from my acquaintance with their teacher.

This exercise was succeeded by a lecture from one of the boys some fourteen years old, upon heat, the thermometer, the principles of Natural Philosophy applied to the explanation of the various phenomena of freezing, thawing, raining, &c., which the teacher as-

sured me had been very slightly corrected by him. It was certainly quite remarkable. Then commenced an examination of the whole class upon this branch of Natural Philosophy, conducted something as that had been in Moral Philosophy. It was highly satisfactory to the commissioners, and revealed the happiest talent in the teacher of interesting his pupils in what they studied. He asked them, among other things, what a man about to ascend Mt. Blanc should take for food? "Meat, because it is the most solid." How would you prepare it?" "Boil it?" "Why?" "Least trouble." "What temperature does the proper preparation of meat require?" "212°." "Could you heat water to this temperature, in an open vessel, on Mt. Blanc?" Following this up with questions calling forth explanations, he gave the most satisfactory evidence of the thoroughness of their instruction.

Algebra succeeded Natural Philosophy, and though the teacher performed most of the solutions himself, there was a promptitude and eagerness displayed, in directing him what to write, that proved his having the secret of advancing his pupils. The achievements were not of the highest order—indeed not so high as I have known among young Misses of equal age. Still they were such as to indicate thoroughness on the part of the teacher.

In the afternoon, the exercises, commencing with a song, in which as before most of the pupils joined, were conducted in the same general manner as in the morning. The government commissioners, a few patrons, and a few strangers were present. Immediately after singing, the teacher of History commenced the examination of his class. It was most exciting to all, the audience as well as pupils. He opened by saying—"In the sixteenth century there was a war in Germany called the"—"The thirty years' war," shouted the boys. He resumed—"which commenced"—"in the year so and so,"—"at"—"such a place." "A battle occurred between"—the Generals' names were given, and so on. Occasionally a mistake was made by some one, which the teacher reproved by a deep expression of pity, regret, and surprise. The pupils were conducted through the history of Germany generally, and of their own state particularly.

Then followed an examination of the classes in French, including recitation and declamation.

Then succeeded organic Chemistry—commencing with the formation of starch in plants—their gum and sugar. Then the conversion of sugar into carbonic acid and alcohol. Then the absorption of oxygen by the latter, and the formation of vinegar. Then came a parallel between the egg and seed, showing how the seed contains in its nitrogenous ingredients something like the essential to the development of the chick. It was profoundly grateful to find in these boys a knowledge of the great fundamental principles of animal and vegetable physiology.

At the close of the day's examination, the director, in a very unfeeling manner, with no language of approbation or condolence, announced that of the second class, all would, at the commencement of the next term, be promoted to the first, except three, whose names he mentioned, and whose seats he pointed out. The lads, who were not poor students, but unfortunately of subordinate capacity, burst into tears. One of the teachers remarked to me—"The director knows very little of human nature—these boys are dispirited. They might have been saved."

The total independence of the teachers from all responsibility to parents, has its advantages doubtless, but it sometimes permits men, who, though possessed of intellect, lack the higher requisites of human feeling, to occupy situations of great responsibility, and to which they ought never to have been appointed.

This director is quite a little tyrant in his way. All the subordinate teachers approach him, though the inferior of many of them, as if he were the grand duke himself. Their salaries depend upon their being at peace with him. He knew Pestalozzi, and wrote a book which was thought to indicate fitness for such a situation, and thus gained it.

Teachers are removable only for misdemeanor, and are therefore at rest about their salaries and their living, when once connected with an Institution. The road to preferment is through the press; and hence it is that the German bookstores teem with such multitudes of books, given out every year.

The salaries increase with years, and when the teacher is too far advanced to perform his duties with efficiency, he is pensioned, and permitted to retire. The director receives \$400; the teacher of Chemistry and Natural Philosophy \$320; the others less, down to \$100.

In Giessen, there are seven different kinds of schools. Three for the humbler classes, receive boys and girls of different ages, up to fourteen years. Two for the better classes; and the Real Schule, and the Gymnasium, more nearly corresponding with our colleges, make up the number.

Every child less than fourteen years of age must attend school, upon penalty, in case of neglect, of the imprisonment of the father. The teachers are paid by government, though the parents must pay a part of the expense of tuition, directly.

Boys intended for the superintendence of mining operations; for apothecaries; for any of the avocations where profitable pursuit requires a knowledge of science, as well as all intended for the professions, are sent to the Gymnasium. Either of these schools receive pupils at six or seven years old, and they ordinarily continue in each till they complete its course.

The title of teacher and of Dr., if it had been conferred, belongs to those gentlemen who preside over the various departments of instruction in the Gymnasium and Real Schule. Professor is conferred only upon those who hold ordinary or extraordinary professorships in the University.

The Misses, who will extend their education beyond the range of primary schools, are instructed by private tutors.

All young gentlemen destined to the University, must have passed through the Gymnastic course, which, in its classical and mathematical features, is quite equal to our college course.

LIGHTNING DIMINISHED BY TELEGRAPHS.—We see it stated on various hands, that the multiplication of telegraphic wires through the country, is going to restore the electric equilibrium between different places. How will it do that, pray? A thunderstorm is often an accumulation of clouds five miles high, and forty miles in diameter, and a half a mile or more up to the lowest part. The earth itself is already an excellent conductor, and would do much more towards restoring equilibrium, by means of its ten thousand points, everywhere stretching upwards, in the form of hills and trees, than a few horizontal wires, twenty-five feet above its surface, with no upward points. The great mass of the fluid is miles above; and the little explosions in the telegraph offices, no more affect the electricity of these leagues of charged matter, than mid-ocean by the discharge of a pop-gun.

AGRICULTURAL CHEMISTRY.—This has become so fashionable, (very useful indeed it is, in its place,) that the papers of the country are very largely sprinkled, if not literally filled, with the most absurd suggestions and conjectures, in constant attempts to explain everything scientifically.

AGRICULTURAL SCHOOLS—No. II.

No candid man, after due reflection, will deny that the elevation and improvement of agriculture, both in its character as a business in which masses of human beings are engaged, or as an occupation upon which the world depends for food, is of the first importance, and of deep and abiding interest to an agricultural state. Nor do I imagine that reflecting minds will hesitate in admitting as equally true, that education, improvement in agricultural science, and the intellectual advance of farmers, must of necessity form the chief element in elevating and perfecting the noblest and best of all callings, and the truest and most pleasing of all sciences. Education is the Archimedian lever, which will, with an irresistible power, raise to its real pre-eminence, the farming interest, and elevate to their rightful position the farmers of the country.

In no land upon which the sun shines, do the same inducements present themselves for mental improvement, and no where else can education work such magic influence for good to the masses, as here; for no where else has republican institutions placed upon an elevated level, all the people—here personal freedom is unrestrained—here no cruel social distinctions rise up to crush rising aspirations, and drive into hopeless obscurity rising genius. Here, too, the right to property is free, title to land unfettered, and industry and perseverance make it attainable by all. Here all may acquire knowledge—that better inheritance than gold or silver—for on every side the school house stands with open door, and invites all, almost without money and without price, to drink from their rich and pure fountains, for truth is always pure, and knowledge always rich, emanate when or where they may. It is indeed a goodly land, and I imagine there are but few among us who are not proud to call it “his own, his native land.” But far as we stand in advance of other nations, we have not, I think, yet reached perfection; we have yet much to learn and much to do in order to progress and improve. In our educational department—in the elevation and improvement of our schools, much remains to be done, both by the state in her sovereign capacity, and by the people in their private relations. Legislators must enlarge their vision, and boldly advance with the light of science, and be prepared, with a wise and liberal hand, to give new and increased facilities for the spread of knowledge—and the education of the people, where common sense and sound judgment point the way. There is no danger of too many schools or too much learning; at least the farmers of the state have a wide margin on which to work, and a great advance yet to make, before they come up with other classes.

The idea, I think, is quite prevalent among men, that the business or pursuit of farming, requires little else but physical strength, powers of endurance, and capacity to labor—that it is a business of the hands and sinews, and not of heart and head—that any dolt can plow, and sow, and reap. While we grant that the above are essential to success in tilling the soil, we hold, as all right thinking men must hold, that they are subordinate to the higher and commanding power of intellect, and stand, in relation to the mental influence, in the same secondary capacity with the horse and the ox, and the passive machinery of the farm. In truth, there is no trade or calling, be it ever so intricate or nice, which requires more intelligence, sounder judgment, and more discriminating wisdom and forecast, than farming. In no business is there greater

need of scientific knowledge—the farmer, above everybody else, if he would receive full recompense for his toil, should understand the power of chemical action—the results of the combination of simple substances—the changes produced by such combinations; for who, like the farmer, has so directly to meet and provide for the changes of the ever-changing weather; for heat and cold; for spring-time, summer, and autumn; for wet and dry; and for all the variations attendant upon these shifting scenes and circumstances. I know, indeed, that long practice and close observation will do much to fit the farmer for his business, but it cannot, from the nature of things, provide him all the information he needs; for there is a kind of knowledge which cannot be received by intuition, nor learned by simple observation: effects may thus be witnessed and scanned, and be often times rendered vastly useful in the conduct of the farm; but the farmer should *understand causes*, as well as witness effects, for then he can oftentimes manufacture effects indispensably necessary to his success. Scientific knowledge, combined with a quick perception, sound judgment, and every day practice on the farm, are the chief requisites for the perfect farmer; and the first requisite, and which after all is the best foundation upon which to build, it is idle to look for without agriculture is taught in our schools, as a distinct, separate branch of education. It is true that the principles of agricultural science are all about us; but it is also true that the wisest cannot comprehend or render them practically useful without much and patient study—long and critical examination—and by sure and oft repeated experiment; and all experience teaches us that it is difficult to *begin to acquire an education* in old age. Men acquire habits of thought as they do physical habits—and it is hard to break up old associations, and to commence to learn new things. Men sometimes indeed break through all obstacles and rules, and become celebrated scholars, after the meridian of life has passed. But there can be no doubt as to the rule, viz: that education, in order to become thorough and perfect, should begin in youth; and I can see no reason to except agriculture from that rule. Nor is there any occasion for its interdiction from the places where our youths commence the acquisition of knowledge, and where the mind first begins its disciplinary process. Impressions made in youth are hardly ever eradicated, and so of principles; relate they to morals or to science, when once impressed on the youthful heart, and when they are fully indented there, by days and years of constant drilling, will, in nine cases out of ten, retain their legibility, so long as life lasts. Men are always adding to their stock of knowledge; day by day they learn new facts, and acquire increased knowledge, and literally education is only finished with life, or the beginning of dotage. But such, I imagine, is not the true meaning, certainly not the generally received definition of the term: Education, in its usual acceptation, is a thing belonging to the earlier years of life—it is the storing up of knowledge to be used as occasion requires afterwards; the acquisition of facts and principles, rules and memoranda, to be used in all subsequent life, as occasion may require, or circumstances demand. If I am correct in this view of the subject, all must at once see the importance of introducing agriculture into our system of education, and of making it a permanent branch of study for those who expect or desire to till the soil for a livelihood. Is it not true that farming is governed by certain fixed principles

that the soil in its combinations has certain fixed rules—that mother earth, in all her diversified forms, is yet governed by laws as unalterable as those of the Medes and Persians. In truth, earth, and air, and sky, with all the laws pertaining to each, are properly within the sphere of the farmer's study, and may, and should form part of his education. He toils, and sweats, and is sustained by hopes of a plentiful harvest; and should he not then be able to take full advantage of every law of production, to aid him in his labors, and to render certain the end he seeks? I here repeat, that it is idle to expect results, such as I have glanced at, without adequate means, viz: without introducing agriculture into our schools, and making it a fixed and permanent department of study and education. The great truths and principles upon which it is founded, should be indented upon the minds of our youth, by patient, persevering study; it should be begun in youth, and fixed in the memory as among the most useful acquisitions it can make for after life. And to accomplish this great and desirable end, I would establish in the state two or more agricultural schools. My idea is that these schools should be of the highest order, and that they should be liberally aided in their inception, and for the few first years of their existence, by the funds of the state—for in no other way can they, or will they, be established so as to become permanent. This I conceive to be the initiatory step—the starting point, towards a general system. Agricultural science needs some rallying point—some elevated position, where it can make itself known and respected, and from which it can scatter its precious influence over the entire state. Sound philosophy would dictate a commencement at the highest point, viz: with colleges, instead of district schools—for in a question of this character

it is better and easier to expand from such a point—from a fountain broad and pure, than from one circumscribed and obscure. Let the minds of the farmers once be directed to this subject, by the establishment of an Agricultural College and Experimental Farm, in the east, in the centre, and in the west; let a few of their sons enter these institutions, and study the art and the science of farming; let it be clearly demonstrated that such a thing is practicable; and soon, in the natural and regular order of events, we shall witness the gradual spread of agricultural schools—an increased and increasing interest in agricultural knowledge—and in good time, most, if not all our district schools, will have a regular, permanent class studying and preparing, by acquiring a proper education, for farmers.

I have not time, in this paper, to enlarge, as I should like to do, on this subject. I ask the attention of the Legislature, now in session, to this important subject. No subject which can come before that body, is of more interest to a vast majority of the people than this—it concerns more than the present generation; it looks into the future, and in all time to come will distil its benefits and blessings. As legislators, look at the matter in its comprehensive aspects, survey the whole ground, and let no narrow or stinted policy prevail in your action—a few thousands now appropriated and wisely spent, will add millions of wealth to the state. Again I say, be not restricted in your action. When the bill now before you, for a school in the east, comes up for action, meet it in the spirit of an enlarged and enlightened liberality, and give, not only to the east, but also to the centre and the west. Adopt a system commensurate with the wants of the state, and be assured the people will thank you. D. A. OGDEN.

CULTURE AND DISTILLATION OF PEPPERMINT.

It should not be surprising, that in a country so diversified in both soil and climate as is the United States, that we should learn every year of some new fruit, or grain, or vegetable, which lends its tribute to the augmenting wealth of the national prosperity. The primary staples of the nation have been subjects of long and familiar discussion, and improvements in their cultivation are constant and progressive. The minor products of the soil, which enter into the economy of general consumption, and add to the national wealth, are often little thought of save in the immediate localities of their production. In the report of Judge ELLSWORTH, late Commissioner of Patents, we have been informed of the great amount of white mustard, and the large profit which it has yielded to the producers, in a limited district of the western part of the country, and this, too, without withdrawing much time and attention of the growers from other crops of greater value.

In this section of New-York, there is an article alike valuable for its medicinal and other uses, which has been cultivated with great profit to the producers, that has hardly attracted attention even in the immediate neighborhoods of its production. I allude to the article of *Peppermint*, and its distillation into oil, and its manufacture into essence.

It is to invite attention to this subject, that I am induced to give you a brief history of its cultivation in this neighborhood. Its cultivation is principally confined to a few persons in Phelps township, in this county, and Lyons and Arcadia townships in Wayne county. It is cultivated without any serious interference with the necessary attention to other crops, and has

yielded, for some years past, some fifty or sixty thousand dollars annually to the producers.

This species of mint was first introduced into this vicinity, by the Messrs. BURNETT, some thirty years ago, who first planted it on the flats of the outlet of Canandaigua lake. They brought it with them from Ashfield, Massachusetts. They distilled it, and sold the oil, in the western part of New-York and Canada, at prices varying from five to fifteen dollars per pound, and realized, from small beginnings, each a handsome fortune. When the oil is diluted into essence, the profits are very great.

This mint differs from what is generally called spear mint. The peppermint has a larger stalk, and a larger leaf, than the spear mint. In rich ground it will grow from two to two and a half feet high.

The principal expense in its cultivation is in procuring the roots for the first year's crop; and the chief labor is in the first year's cultivation. The ground should be rich, and should be carefully plowed in the fall or spring, so as to be entirely free from grass and weeds.

It is cultivated from the roots, which should be planted in the spring, in drills from eighteen inches to two feet apart, and should be cultivated carefully with the hoe until after mid-summer, at which time it sends forth runners or shoots, like the strawberry, and covers the entire space planted, sending forth innumerable branches and stocks. It is cut in the fall when matured, and distilled into oil. The roots remaining in the ground during winter, vegetate in the spring, and covering the entire space planted, require no cultivation the second year, and so also of the third year. By

the end of the third year, the ground becomes so exhausted, and so infested with grass and weeds, that it is necessary to plow up the roots, and plant fresh grounds. So the first year is the only one of expense or labor in the cultivation, as it requires no cultivation the second and third years. The crop is exhausting to the land. Lands have rented from eight to ten dollars per acre for the purpose of raising this mint upon them.

If the seasons are favorable, and the lands rich, the crop the first year will yield mint that will produce from ten to thirty pounds of oil to the acre. The second year (which is the most productive) from twenty-five to forty pounds; and the third year from ten to thirty pounds.

The process of distilling the mint into oil is simple: The mint when mowed, on maturing, is placed in an ordinary still boiler with water, and fire is placed beneath. The evaporation is condensed in a retort, and the oil being of less specific gravity than the water, floats on the surface. The water in the retort is permitted to escape by a tube beneath the surface of the

water in the retort, on which the oil floats. The mint, after being distilled, is taken from the boiler with a hook, and the boiler filled with fresh mint and water, until the whole crop is distilled into oil.

The process of purifying it from all extraneous matter, is to filtrate the oil through clear white paper. It is then placed into tin canisters, containing about twenty-five pounds, and tightly corked and sealed, and is then prepared for market.

Many persons, who have cultivated it for years, have realized handsome fortunes, and without interfering with the regular production of other crops on their farms.

I may state, in conclusion, that for several years past the speculators of the cities have monopolized, by private purchase, nearly the entire crop in this region; and this year they have purchased the mint, and destroyed the most of it, so as to demand a greater advance on the last year's supply of oil.

ELIAS COST.

Oaks' Corners, Ontario co., N. Y., Sept. 1, 1847.

BROOM MANUFACTORY.

HAVING a few hours to spend at Schenectady about the 1st of September last, our friend, Mr. CHARLES H. TOMLINSON, kindly accompanied us to several places in the vicinity, and among the rest to the broom manufactory of Messrs. VAN EPPS.

They have been engaged in the business about eleven years. They have a farm of about 300 acres—200 of which are Mohawk flats. A large portion of the flats was formerly of little value, in consequence of being kept wet by a shallow stream which ran through it, and which, together with several springs that issue from the sandy bluff on the south side of the flats, kept the ground marshy, and unfit for cultivation. By deepening the channel of the stream, and conducting most of the springs into it, many acres, which were previously almost worthless, have been made worth \$125 per acre. They have also, by deepening the channel, saving the water of the springs, and securing all the fall, made a water privilege, on which they have erected an excellent mill with several run of stones, leaving, besides, sufficient power to carry saws for cutting out the handles of brooms, &c.

They have, this year, about 200 acres of the flats in broom-corn. The cultivation of this article has within a few years, been simplified to almost as great a degree as its manufacture. The seed is sown with a seed-barrow or drill, as early in spring as the state of the ground will admit, in rows about 3½ feet apart. As soon as the corn is above ground, it is hoed, and soon after thinned, so as to leave the stalks 2 or 3 inches apart. It is only hoed in the row, in order to get out the weeds that are close to the plants—the remaining space being left for the harrow and cultivator, which are run so frequently as to keep down the weeds. The cultivation is finished by running a small double mould-board plow, rather shallow, between the rows.

The broom-corn is not left to ripen, as formerly, but is cut while it is quite green, and the seed not much passed the milk. It was formerly the practice to lop down the tops of the corn, and let it hang sometime, that the "brush" might become straightened in one direction. Now the tops are not lopped till the brush are ready to cut, which, as before stated, is while the corn is green. A set of hands goes forward, and lops or bends the tops to one side, and another set follows immediately, and cuts off the tops at the place at which they were bent, and a third set gathers the cut tops

into carts or wagons, which take them to the factory. Here they are first sorted over and parceled out into small bunches—each bunch being made up of brush of equal length. The seed is then taken off by an apparatus with teeth, like a hatchel. The machine is worked by six horses, and cleans the brush very rapidly. It is then spread thin, to dry, on racks put up in buildings designed for the purpose. In about a week, with ordinary weather, it becomes so dry that it will bear to be packed closely.

The stalks of the broom-corn, after the tops have been cut off, are five or six feet high, and they are left on the ground, and plowed in the next spring. It is found that this keeps up the fertility of the soil, so that the crop is continued for several years without apparent diminution. It should be observed, however, that the ground is overflowed every winter or spring, and a considerable deposit left on the surface, which is undoubtedly equivalent to a dressing of manure. This may be inferred from the fact that some of the flats have been in Indian corn every year for forty or fifty years, without manure, and with good cultivation have seldom produced less than sixty bushels per acre, and with extra cultivation, from eighty to ninety bushels have been obtained. In case of need, the stalks would furnish a large amount of good food for cattle. They are full of leaves, which are very nutritive, and whether cut and dried for winter, or eaten green by stock turned on the ground where they grow, would be very valuable in case of deficiency of grass.

Messrs. VAN EPPS employ twenty hands during the summer, and in autumn, when the brush is being gathered and prepared, they have nearly a hundred, male and female. They are mostly Germans, who come here with their families during the broom corn harvest, and leave when this is over.

The manufacture of the brooms is carried on mostly in the winter season. The quantity usually turned out by Messrs. V. E. is 150,000 dozen per annum.

TO SAVE HICKORY FROM WORMS.—A correspondent of the *Prairie Farmer* says, that to prevent the common evil of hickory timber becoming worm-eaten, it must be cut during the last half of July, or first half of August. This is stated to be effectual. Does this depend on the habits of the insect, or the quality of the timber at this season?

RURAL NOTICES ABROAD—No. IX.—By I. K. MARVEL.

WINES AND VINEYARDS OF FRANCE.—I have already taken occasion to speak incidentally of the general appearance of the French vineyards. They belong, by association, to all our ideas of French landscape, and make up as important a feature in the rural aspect of the country, as the corn fields in the northern states of our Union.

Still, it must not be supposed that the wine culture belongs to every district of France. Through the whole northern third of its territory, vineyards are rarely met with, and only upon some warm slope exposed to the sun, or in some closely sheltered valley. Indeed the sunny slopes are the favorite situations for vineyards throughout France; in more southern countries, a flat surface, and even a northern exposure, have been preferred. The soil most generally favorable is calcareous—such is the famous grape land of the *Côte d'Or*, from which come the finest of the Burgundies—such, also, is the better portion of the *Côte Rotie* by the Rhone, being a calcareous belt lying between gneiss rock. The vineyards of Champagne are also of the same general character.

A stranger, passing only by the great diligence routes through France, would be rather surprised at the absence of vineyards, than at their frequency—the great roads passing, for the most part, over broad plains which are unsuited to the grape culture. Between Dijon and Chalon sur Saone, however, the traveller will pass through the richest of the Burgundian vineyards; and if he be not shut up to a tedious night-ride, he may see every slope upon his right, looking eastward, covered with vines. They ascend in terraces, and upon shelves of the crumbling rock, till they reach a height of a thousand feet. The soil is a yellowish red, and full of the broken limestone. The vines are low, not thrifty in appearance, and clusters and grapes are small, yet from them come the much prized *Chambertin*, *Mints*, and *Branne*. From this golden hill-side, as it is expressively called, rich meadows stretch twenty leagues away to the heights of the Juras; and looking back from those heights, near the little town of Poligny, a scene of agricultural magnificence is presented, unsurpassed perhaps in the world. Fir forests stretch down the sides of the mountains around you—between them, perhaps, a grassy valley, on whose warmest edge a few vines are cherished, and in its bottom a brook, that tumbles away through green pasture-lands and cornfields, and orchards, till it empties into the river Doubs, lying like a silver thread in the plain. Then grass, and wheat, and vines alternate, till the first lift of the *Côte d'Or* is seen, in yellow soil, and yellow vine leaves scarce turned blue in the distance.

The vine is propagated universally by cuttings; and as quality of wine is found to depend more upon situation of vineyard, than any natural characteristic of the fruit, not so much attention is paid to growth of new sorts, as might at first be supposed. It is found, indeed, that the same grape, upon lands not a league apart, will produce totally different sorts of wine.

The grape which produces the delicious Constantia at the Cape of Good Hope, is said to be the same in appearance, with that of many indifferent vineyards along the Rhine. Nor are the best wine grapes by any means the most palatable to the taste. Fruit from many of the favorite vineyards, is, from its acid taste, totally unfit for the table. And though the vineyards

in France are so world-wide in reputation, almost any country can furnish equally good, if not better grapes for the table. It was rarely that I saw, in the Paris market, fruit superior in appearance to that grown in the graperies of this country.

I have, in a previous letter, spoken of the method of pressing out the wine in the choice vineyards of Burgundy. The older vines furnish the best wine, though a far less quantity than the new vineyards. Seasons vary much in their products, and not unfrequently a very large vintage is comparatively worthless; and Chambertin becomes *vin ordinaire*, or the ordinary drink of the peasantry. That a large portion, however, of this inferior product reaches this country under its reputable name, is very probable—it is, in nineteen cases in twenty perhaps, the refuse stuff, by which our pretending dinner-talkers form their notions of *les bons vins* of Burgundy.

I may be pardoned for dispelling another pleasant illusion: The vineyards of Chambertin—the favorite wine of Napoleon, and of emperors of our time—covers only from fifteen to twenty acres of ground. You cannot buy a bottle of the wine at an inn, within a stones throw of the vineyard, for less than 8 to 10 francs, (\$2.) Yet I have found the same, at a less price, in half the hotels between Niagara and Saratoga! Who would be so foolish, in view of this, as to go to France to drink wine?

Along the Rhone, are to be seen the favorite vineyards of the *Côte Rotie*, the Hermitage, and St. Peray. The latter differing from most others in lying upon a gravelly, granite soil, which is manured with decayed leaves. The dressings of the other two are for the most part sheep and horse-dung.

The Hermitage is better known by name than taste; and is more frequently seen on the bills of our enterprising inn-keepers, than in their cellars. The whole extent of the vineyard is about 300 acres, lying along the bank of the Rhone, in such way as to be exposed to the full play of the sun. Its name is derived from a little ruin on a height, where it is said a hermit lived many years ago, and cultivated a small spot with vines which were found to yield the richest wine of the country. It is needless to say that the old hermit is long since dead; that the vineyard has quadrupled its size; and that the wine has lost none of its flavor.

The red Hermitage, of best quality, is purchased by the wine merchants of Bordeaux to mix with the better clarets; and the white, though you might be troubled to find it pure at Lyons or Marseilles, I dare say you can find, at \$2 the bottle, at any inn in Schenectady or Chicago. And though gentlemen of the neighborhood would speak diffidently of its qualities, there are plenty of coxcombs in New-York and Buffalo, who will dilate upon its aroma and body.

The St. Peray is a sparkling wine, not unlike Champagne, and more wholesome from the fact that it receives its sweetness from the saccharine qualities of the grape, and not from the syrup which is mixed with Champagnes. The fruit is of a bright yellow color, with the exception of some portion of the vineyard, on which is grown a red-skinned grape, from which is made a rose-colored wine.

The fruit ripens by the middle of September, and the wine is treated very much in the same way with the Champagne wines—of which I may have something to say in another paper.

SMITH'S PATENT LEVER DRILL OR GRAIN AND SEED PLANTER.

I take the liberty to send you a description, having not as yet been able to procure a cut, of the Patent Lever Drill, or Grain and Seed Planter, introduced by me, and for the first time presented for general inspection in the State of New-York, at the State Fair at Saratoga.

The drill has been used in England many years, and a fair specimen of the original, a very complicated and cumbersome machine, was there also.

The first improvement on the English drill, in this country, was made by, and patented to, Mr. PENNOCK, of Pennsylvania, some six years ago—a very excellent machine, light, easy to operate with, but also complicated, and by many considered too much so, for general and indiscriminate use. This, however, is well worth \$100, the price it sells for.

The inventor of the drilling machine, introduced by me, Mr. H. W. SMITH, also of Pennsylvania, has spent several years to improve the same, by making it perfectly simple, at the same time retaining all the important principles, and adding such others, as modern scientific discoveries in husbandry, rendered necessary to perfect the work—this is sold for \$75.

This drill has some new mechanical principles or combination of principles not before in use.

The wheels are of new and simple construction.—The axles are of cast iron, extending half the width of the machine, with a flange some six inches in diameter on the end, which, with a cast iron plate of the same dimensions, screwed on the wheels, retains the spokes, and forms the hub. These wheels and axles may be adapted to carriages, wagons, &c.

On the axles are cast also the cylinders, three on each, in which indentations or holes are drilled, to carry the grain through valves, out of the hopper, a box extending the width of the machine, into tubes, through which it is deposited in the furrow.

It has a lever by which all the teeth can be lifted out of the ground, for the purpose of turning in the field, or passing over a rock, or packing to remove to or from the field, by a single operation; and another to close the valves and shut off the feed at the same time.

It has a graduated index, by which it can be set, to pass any given quantity of seed per acre, or altered from one quantity to another in a few seconds. *This cannot be done by any other machine, so as to insure uniformity and certainty, without some mathematical calculation, and much time in testing its accuracy.*

The teeth are long to prevent clogging, and can be easily cleared by the operator, in case they should gather grass, &c. They are bent something like cultivator teeth, and are made to cut a furrow three inches wide at the bottom, where the seed is deposited, at any required depth, through the tubes which are fastened to the back of the teeth. The depth can even be adjusted by a regulator, in which the back end of the pole is inserted. After the seed is deposited, the earth falls back and covers it.

The operation of this machine, after the grain is planted, leaves a slight furrow, the sides of which are abraded by the action of every shower, and a portion of the soil is periodically carried on and around the roots of the grain, covering them a little more each time; and thus, by a course of natural cultivation, the surface is kept new—no crustation takes place to retard the growth of the young and tender plant—the atmosphere and gases readily permeate the soil, and the

continued cumulation of soil on the roots prevents destruction, or heaving out by frost.

The position of the furrows has a tendency to concentrate the gases from the atmosphere, when brought down by showers, around and in immediate contact with the roots of the grain—from that circumstance it will require longer time to evaporate those gases, and give the plant more time and better opportunity to draw a greater supply of sustenance from that source. The consequent rapid growth and strength of the plant, enables it more effectually to resist, or overcome and outgrow, the otherwise destructive action of the "fly;" and the uniformity of its growth, and exposure to the light and atmosphere, prevents rust and mildew, in those situations where otherwise it would be subjected thereto.

With this machine, a boy, and pair of horses, ten acres per day are readily planted, and five pecks of seed are equivalent to two bushels per acre, sowed broadcast—for the reason, that with the drill machine, the grain is distributed evenly, and buried at a uniform depth, and every sound seed vegetates; while, on the contrary, in the broadcast system, there can be no certain uniformity in sowing. Or if sowing machines are used, and the seed scattered evenly over the surface, still there is, and can be, no certainty that any particular or definite quantity per acre will be applied; for I have as yet, never seen or heard of a sowing machine graduated to regulate the quantity per acre. Again, whether sowed by hand, or with a machine for that purpose, the grain cannot be covered equally at a uniform depth.

If the harrow is used, some part is not covered, and is left a prey for the birds; some so slightly covered, that the first shower subjects it to a similar disposition; or, if left, its growth is retarded, if it does not perish the first drought; others again covered so deep as to prevent a uniformity in the growth of the crop, subjecting the more sickly plants to destruction by the "fly."

If the cultivator is used to cover the grain, the consequences may be still more injurious. In addition to those resulting from the use of the harrow, the grain is deposited under the ridges, and instead of the earth gradually cumulating on and around the roots, by showers, it is washed away from them, and the gases are farther removed, and do not, while evaporating, so readily come in contact with the grain.

I have thus in relation to only one of the operations of farming, the seeding part, as connected with the drill machine, enumerated several circumstances which have a tendency to diminish the crop, and others by which it may be enhanced; each of these circumstances, and doubtless there are others, is trifling, considered in reference to itself, or the single plant influenced thereby; but when the whole is considered collectively, we can readily see where great improvements may and will be made in the art and mystery of farming.

The fact then becomes evident, aside from practical demonstration,* that by the use of the drill, the great aggregate result, from the several minor causes and considerations before named, with the saving of seed, is an actual gain and increase of product of 25 per cent. over any and all other practice.

* See Farmer's Library and Monthly Journal of Agriculture for June, 1846.

In conclusion the following astounding suggestion is presented, that, if all the land now under grain culture in the state of New-York, was adapted to the drill, and that alone used, the value of the actual increase of the wheat crop alone, would amount to near *four millions* of dollars, and of other grain about *three millions* of dollars. From these considerations, I am free to say, that the Patent Lever Drill or Seed Planting Ma-

chine, is the most valuable, wealth-increasing, agricultural implement ever introduced, since the cast iron plow first made its appearance. Very respectfully, yours, &c., C. MASTEN. *Penn Yan, Sept. 21, 1847.*

[We understand these drills will be manufactured and for sale at Rochester, Geneva, and Penn Yan, where Mr. MASTEN resides, who will dispose of rights to manufacture them in other places.—ED.]

THE ORCHARD AND THE GARDEN.

BUDDING ONCE MORE.—An article of mine, proposing some improvements in budding young trees, appeared, I think, in your Oct. number, 1846, and received several subsequent notices. Now, sirs, I frankly state, that I think I was too hasty in adopting notions expressed in that article. With too little time for a fair experiment, I drew some conclusions the value of which I now question. For example:—At the time I wrote I had several budded peach trees and pear trees, that were budded in July, and topped down in order to secure a present year's growth, and thus gain a season. I can now state the result: which was, that I saved not a single bud thus got forward, from the winter. Not being well wooded, they all died. And, agreeably to a suggestion of one of your most experienced correspondents, one tree itself also died—not probably, as he supposed, by being poisoned by the dead bud inserted, but being too much cut down, and by being deprived of its leaves in a growing part of the season, when a tree could hardly live without lungs. No tree can be deprived of its leaves by grafting, budding, or feeding silk worms, without endangering its growth and existence. I conclude that the old way of budding, with a very slight topping, is yet the best.

One word on transplanting trees:—Some little experience induces me to think that peach trees, and perhaps other *small* trees, may be transplanted any month in the year, by adopting the following suggestions:—First, clip off most of the leaves. With the leaves on, a rapid evaporation of sap takes place, seen in the wilting of the leaves, and if continued, will soon be seen in the shrivelling of the bark. Consequently we secondly suggest the keeping of them as short a time as possible out of the ground. Thirdly, it is of incalculable importance in taking up trees, that the ground be loosened by a crowbar as far as the roots extend, and that *all* of the roots be obtained. You are very much mistaken if you suppose you have purchased fifty trees, if the vender has not sent you the *roots*. And having obtained the roots of your trees, you will find it no easy matter to set them out again without liberal *holes* for them. And to have your ground rich, is as necessary for success as where you are designing a good harvest of corn. The smaller the trees when taken up, the better.

Messrs. Editors, will you tell me why my Isabella grapes, during August, this year and last, are very much given to rot upon the vine? Is there any remedy? R. T. *Prospect, Conn.*

N. B. I tried budding in May from scions, cut early for grafting, and did not succeed in making one grow.

DUBOIS' EARLY GOLDEN APRICOT.—This is a seedling variety, originated by our neighbor, Mr. CHARLES DUBOIS, of Fishkill Landing, N. Y. It has attracted our attention for two or three years past, and as it appears well worthy of something more than a local reputation, we have procured specimens from the origi-

nal tree, and now publish a correct description of this new variety.

Though this apricot is of small size, and simply good flavor, it has two qualities which will, we think, render it popular among fruit cultivators. The first is its great productiveness at all seasons; and the second, its comparative exemption to the attack of the curculio.

We may give a pretty correct idea of the *Early Golden Apricot* by saying that the crop of fruit borne by the original tree (which is growing in common loamy soil without preparation) has been sold in the New-York market, for the last three years, at prices varying from \$4 to \$16 per bushel. In 1844 the crop of this tree brought \$45; in 1845, \$50; and the last year it was sold for \$90. The fruit is very fair in appearance, and bears carriage to market well.

Mr. DUBOIS, who is a pretty extensive orchardist, finds that in seasons when the fruit of the *Moorpark*—one of the best and surest sorts—nearly all drops before maturity, stung by the curculio, that of the *Early Golden* hangs in rich clusters on every limb. With him, indeed, this sort among the apricots, appears to be avoided by this insect, in the same way that the common *Damson* does among plums—probably from the thickness or some other peculiarity of the skin.

We cannot but think, therefore, that in all parts of the country where the sorts of apricots already in cultivation fail because stung by the curculio, this variety will be likely to give abundant crops. The tree, probably from being a native seedling, is also more thrifty and hardy than most other sorts.

Mr. DUBOIS has propagated quite a stock of young trees, and will, in the autumn, supply orders at a very moderate price.

Dubois' Early Golden Apricot.—Fruit small, about 14 inch in diameter, roundish-oval, with the suture narrow but well marked, but extends only half way round. Skin smooth, uniform pale orange. Flesh orange, moderately juicy and sweet, with a very good flavor; separates from the stone. The latter is oval, very little compressed, kernel sweet. Ripens from the 10th to the 15th of July, ten days before the *Moorpark*.—*Hort. for Aug.* [See adv. in Oct. number, p. 325.]

SOIL FOR YOUNG TREES.—We believe it is generally admitted, that transplanted trees succeed best when their early growth has been in soil similar to that for which they are destined to be placed permanently. If raised in such soil, and transplanted to that which is thin and poor, they seem to receive a shock from which they with difficulty recover. As a gentleman once remarked, it is like feeding a calf with all the milk he will take till he is six months old, and then suddenly turning him off to live on a short pasture.

Mr. CHARLES H. TOMLINSON, of Schenectady, who has of late years been much interested in the culture of fruits, informs us that trees grown in nurseries on the rich alluvial lands of the Mohawk, do not thrive

well for some time when set in the soil of the surrounding hills. After several trials, he concluded to raise his trees from seed on land of the same kind on which they were to stand. For this purpose he appropriated a part of a field lying on the side of a hill, the soil rather thin and slaty, to a nursery. He has succeeded in growing apple, pear, plum, and cherry trees on this land, by keeping it entirely clear from weeds, without manure. They are healthy, well-shaped stocks, the wood sound and well seasoned, and of sufficient size for their age. We noticed some plum stocks of the present year's growth that were over five feet high, and some pears which had grown nearly as much. The trees so produced, are transplanted at the proper time, and suffer no check in growth. They are more hardy and thrifty than those taken from the flats.

GRAFTING THE PEAR ON THE MOUNTAIN-ASH.—Mr. TOMLINSON has tried this repeatedly, but it does not succeed. The graft outgrows the stock, and after a few years declines and dies.

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NOMENCLATURE OF FRUITS.—In order that the Pomo- logical nomenclature may be amended, where errors exist, I send you annexed a list of names of Pears that still exist in the American catalogues, which are merely synonyms of the true and established names; and being consequently mere repetitions, their use serves only to mislead and create confusion. I have not included any of the synonyms that are enumerated in Downing's work on Fruits, that being deemed superfluous, save in the few instances where an asterisk (*) is attached, and in which that gentleman has been inadvertently misled—the corrections of which will, no doubt, be made by himself in the forthcoming edition of his work. WM. R. PRINCE. *Lin. Bot. Garden and Nurseries, August 25, 1847.*

* Angora,
Beaumont,
Belle Heloise,
— de Berry,
Bernard,
Beurre Ananas,
— Aurore,
— Blanc de Nantes,
— Bruneau,
— Chaptal,
— de Noirechain,
— de Waterloo,
— Lefevre,
— Piguery,
— Royal,
— Thoin,
Bezi de Caen,
Bonaparte,
Bouchretien de Bruxelles,
— d'Auch,
— Napoleon,
— sans pepins,
Bourgmeister,
Bowdoin,
* Capsheaf,
Captif de St. Helene,
Chenille,
* Charles d'Autriche,
* Charles of Austria,
De Livre,
Doyenne d'hiver nouveau,
— d'Alencon,
Duc de Bordeaux,
Duchesse de Berry,
— d'ete,
— d'hiver,
Esperin,
Fourguois,
Glory of Cambrone
Gros Rateau gris,

Great King Louis,
Grosse Angletterre,
Henkell,
Howland's Winter,
Long Green Swiss,
Louise de Bologne,
Le Cure,
Maria Louise bis,
Melon de Namur,
Monsieur,
Mouthwater,
Moorfowl Egg, of Boston,
Mouille bouche,
Noirechain,
Oken d'hiver,
Orpheline d'Engheim,
Petite Cuisse Madame,
Poire de Louvain,
— de M. Bonnet,
— Neill,
* Pitts' Prolific,
— Marie Louise,
* — Surpasse Marie,
Prucelle de St. Onge,
Roi de Louvain,
— de Rome,
Sabine,
Sans pepins,
St. Nicholas,
Shakspeare,
Soldat Laboureur,
Sublime gamotte,
Sylvanche verte,
Surpasse Marie,
* — Louise,
Trois Jours,
Turkish Bouchretien,
Webber's Autumnal,
Waterloo,
Winter Virgalieu.

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ROSE BUGS.—I have been looking over the last three volumes of the Cultivator to see if I can find any information in regard to keeping rose bugs from vines or plants. I do not find anything to answer our purpose. The way rose bugs have increased for a few years past is a "caution" in the full sense of the word. Formerly we scarcely saw enough to notice them, but this year they came upon us almost like the locusts upon Egypt.

But though they did not eat *all* the "herb of the land and every green thing," yet they were not very fastidious in respect to their diet. We have some fine Isabella grape vines in our garden, and from their appearance we anticipated a crop of about ten bushels; but we shall hardly get twice as many bunches. The bugs "came and destroyed them all." We resorted to various expedients as preventives, but in vain. A steep of tobacco—half a pound of tobacco boiled in a gallon of water, and when cold sprinkled over the leaves, had no perceivable effect. To pick them off would have been impossible—for if out in the field while they were flying about, you might stand still for hours, and hard work you would have to keep yourself clear of them. I think I took a pint from one rose bush one morning, and in a few hours they would not have been missed. Besides eating grape blossoms and leaves, and roses—or rather rose buds (for a full blown rose was seldom found)—they eat clover blossoms, bean, corn, briar, and apple tree leaves, and even apples and peaches after they became as large as walnuts. From their first appearance to the time they disappeared was about three weeks. If they increase as much for two years to come as they have for two years past, I don't know but they will equal the locusts in their devastations. If you, or any of your numerous readers, know of any remedy, making it known in the Cultivator would confer a great benefit on *one* if not *many* of your subscribers. W. L. EATON. *East Ware, N. H., Aug. 7, 1847.*

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STARTING BUDS TOO SOON.—A correspondent in the *Genesee Farmer*, thinks he has made a discovery by the accidental breaking off of the stock just above the inserted bud, which caused the bud to grow immediately. He will probably discover next spring that the winter has totally killed the shoot, if it is a peach, apricot or nectarine; and by the end of another summer, that he has gained nothing in growth, if hardy, like the apple, a few inches growth this year, rather stunting than accelerating growth.

WATERMELONS.—A Trenton correspondent of the *Horticulturist*, says the best watermelon he has ever seen, is a round thin-rinded sort, known as the *Imperial*.

THE BLACK PEAR OF WORCESTER.—Cheever Newhall, of Dorchester, Mass., says that one of his neighbors, who cultivates this pear largely, has realized for several years past, *ten dollars* per barrel, for his whole crop, by shipping them abroad. The tree bears heavy crops.

THE HARVARD PEAR.—The original tree of this variety is standing at Cambridge. The trunk 4 ft. above the ground, measures 4 ft. 2 inches in circumference.

THE BALDWIN APPLE.—This fine apple does finely in western New-York, which has a climate much similar to that of Massachusetts; but at Cleveland, Ohio, it suffers from specks of black or dry rot, like those so common in the Pennock.

VARIETIES OF PEARS.—T. Rivers, of the celebrated Sawbridgeworth nursery, England, has about 900 varieties of the pear, under trial. Robert Manning, of Salem, Mass., has about 800. Probably not forty of all of them are fully first-rate, or worthy of extensive cultivation.

CONFUSION.—A. Bryant, of Princeton, Ill., states that four different varieties of apples have been sold there as Esopus Spitzenburgh, and it is still doubtful if they have the genuine.

PÆNIAS.—The four most splendid pænias are perhaps the Whitleii, Humei, Pottsii, and Reevesii—the first white, the second deep rose, the third dark crimson, and the fourth fine rose—all very large and double, the flowers five to seven inches in diameter.

PREMIUMS AWARDED AT THE NEW-YORK STATE FAIR, 1847.

CATTLE—CLASS I.—DURHAMS.

Bulls over 3 years old.—1. Bell & Morris, Westchester county, "Marius," \$20—2. H. N. Cary, Marcy, "Oregon," \$15—3. J. B. Packer, Charlton, "Tecumseh," Herd Book.

George Vail, for his bull "Meteor," received certificate.
Two years old Bulls.—1. Z. B. Wakeman, Herkimer co., "Young Meteor," \$15—2. George Vail, Troy, "Buena Vista," \$10.

Yearling Bulls.—1. E. P. Prentice, Mount Hope, "Beppo," \$10—2. D. D. Campbell, Schenectady, \$5.

Cows.—1. Geo. Vail, "Hilpa," \$20—2. E. P. Prentice, "Charlotte," \$15.

Two year old Heifers.—1. Z. B. Wakeman, "Sylvia," \$15.

Yearling Heifers.—1. Geo. Ohlen, Schenectady, "Lilly," \$10—2. D. D. Campbell, \$5—3. Jane T. Gould, Troy, "Jenny," Herd Book.

[In addition to the cash prizes mentioned, each of the above persons received a copy of the American Herd Book.]

Bull Calves.—1. Z. B. Wakeman, "Kirkleavington," \$5—2. Geo. Vail, "Major," Washington's Letters.

Heifer Calves.—1. Geo. Vail, "Willy 4th," \$5—2. Geo. Vail, "Willy 3d," Wash. Letters.

CLASS II.—HEREFORDS.

Bulls 3 years old.—George Clarke, Otsego co., "Major," \$20.

" 2 " Edward Wells, Fulton co., "Fulton," \$15.

Cows.—Edward Wells, "Adelaide," \$20.

CLASS III.—DEVONS.

Bulls 3 years old.—Nelson Washbon, Butternuts, Otsego co., "Baltimore," \$20.

Bulls 1 and 2 years old.—1. S. A. Law, Meredith, Delaware co., "Rover," \$15—2. Nelson Washbon, \$10.

Bull Calves.—1. Nelson Washbon, \$5—2. Nelson Washbon, Wash. Letters.

Cows.—1. Nelson Washbon, "Connecticut," \$20—2. Same, "Baltimore," \$15.

Heifer Calves.—1 & 2 Nelson Washbon, for his heifer calves, \$5, and Wash. Letters.

CLASS IV.—AYRSHIRES.

Yearling Bulls.—1. E. P. Prentice, Mount Hope, "Dundee," \$15.

Cows.—1. C. N. Bement, Albany, "Fairy," 5 years, \$20—2. E. P. Prentice, "Ayr," 9 years, \$15.

Heifers 2 years old.—1. E. P. Prentice, "Mida 1st," \$15—2. C. N. Bement, "Maggie," \$10.

Bull Calf.—C. N. Bement, "Roderick Dhu," \$5.

Heifer Calf.—1. E. P. Prentice, "Mida 2d," \$5.

CLASS V.—CROSS AND NATIVE.

Cows 3 years old.—1. John Lee, Cambridge, Washington county, \$20—2. N. Washbon, \$15—3. Phineas Fletcher, Saratoga Springs, \$10.

Two years old Heifers.—1. C. N. Bement, \$15—2. N. Washbon, \$10—3. David Gillett, Butternuts, Otsego co., \$5.

Yearling Heifers.—1. John Lee, Cambridge, Wash. co., \$10—2. C. N. Bement, \$5—3. Joshua Bliven, Saratoga Springs, "Fanny," Vol. Transactions.

Heifer Calves.—1. John Lee, \$5—2. H. H. Lawrence, Saratoga Springs, Wash. Letters.

Bulls.—1. Maynard Deyoe, Saratoga Springs, Col. Tour—2. Joseph Wood, Greenfield, Wash. Letters—3. Daniel Beers, Ballston, Transactions.

Working Oxen—best yoke.—1. Elon Sheldon, Sennet, Cayuga co., aged 4 and 5 years, \$15—2. Pliny Gould, East Nassau, Rensselaer co., 4 years old, \$10—3. John Lee, pair twins, 5 years old, Transactions.

Three years old Steers.—1. Elon Sheldon, \$10—David Gillett, \$8—3. James S. Wadsworth, Geneseo, Livingston co., Transactions.

Best 10 yoke Steers.—1. James S. Wadsworth, \$15.

Best 2 years old Steers.—1. Elon Sheldon, \$10—2. Lewis E. Smith, Halfmoon, Saratoga co., \$5—3. H. N. Cary, Marcy, Oneida co., Transactions.

Yearling Steers.—1. A. Gilbert, Hamilton, Madison co., \$8—2. James P. Noxon, Stillwater, Saratoga co., \$5.

Boys training pair 3 years old.—1. J. N. Adams, Butternuts, Colman's Tour.

Training pair yearling Steers.—1. A. S. Gilbert, Colman's Tour.

Milk Cows.—1. Ambrose Stevens, New-York, Durham cow "Grace," 6 years old, Diploma—2. E. P. Prentice, Durham cow "Esterville," 5 years, Herd Book—3. H. N. Cary, Durham heifer "Rose," 3 years, Trans.—4. John Lee, native cow, Trans.—5. H. H. Lawrence, Trans.—6. Wm. Wolford, Albany, "Red Daisy," Trans.

FAT CATTLE.

1. Warren Halsey, Trumansburgh, Tompkins co., \$15—2. Edward Morrison, Sennet, Cayuga co., \$10—3. John B. Holmes, Saratoga, Colman's Tour.

FAT SHEEP.

1. Z. B. Wakeman, Herkimer, \$10—2. J. McD. McIntyre, Albany, Colman's Tour—3. L. J. Van Alstyne, Canajoharie, Trans.

HORSES—CLASS I.—ALL WORK.

Stallions.—1. Joseph Milliman, Greenwich, Washington county, "Chief Justice," \$15—2. Simeon Christie, Mayfield, Fulton co., "Young Dread," \$10—3. Daniel A. Cornell, Pittstown, Rensselaer co., "Peacock Diamond," Youatt on the Horse—4. Lorenzo M. Lown, Sandlake, "Rockingham," Vol. Trans.

Mares.—J. B. Burnett, Syracuse, \$15—2. Joseph Daniels, Greenfield, \$10—3. Henry W. Dennis, Saratoga, Youatt—4. Maynard Deyoe, Saratoga Springs, Trans.

CLASS II—Draught Horses.—1. Wm. Larman, Pittstown, Rensselaer co., "French Emperor," \$15.

CLASS III—Blood Horses.—1. Ed. Long, Cambridge, "Tornado," \$15—2. Elias Ireland, "Alexander," \$10—3. Abram Butler, Wayne co., "Young Mogadore," Youatt.

Three years old.—1. Simon Schermerhorn, Rotterdam, "Waxy," \$10—2. Samuel R. Garrett, Ballston, "Highlander," \$5—3. Henry Bailey, Bethlehem, "Sampson," Youatt—4. Daniel Davis, Guilfordland, "Rough and Ready," Trans.

Three years old Mares.—Harman Becker, Easton, "Lady Jane," \$10.

Two years old.—Hiram Hall, Grafton, "Empire," \$5.

Ponies.—Four imported ponies, very finely trained, were exhibited by the sons of E. P. Prentice, Mount Hope, and J. H. Prentice, New-York. They were exercised by the lads with great skill and judgment, and the committee recommend a Diploma to each.

GELDINGS AND MATCHED HORSES.

Geldings.—1. Arden Merrill, Rome, gray geld., Diploma—2. Peter M. Moriarty, Saratoga Springs, gray, 6 years, Youatt.

Matched Horses.—1. Herod Otis, Jordan, Onondaga co., bays, 7 years, \$8 and Diploma—2. Aaron Freeman, Milton, Saratoga co., browns, 5 and 6 years old, \$5—Caleb Gasper, Onondaga co., dark gray, 4 years old, Vol. Trans.—N. W. Moore, Sauquoit, Oneida, black, 5 years old, Trans.—Lewis G. Morris, Morrisiana, Westchester co., bays, 5 and 6, Trans.—D. R. McCarthy, New Baltimore, grays, 6 years old, Trans.—Lester Hungerford, Watertown, Jefferson co., brown, 4 years old, Trans.—Henry Vail, Troy, sorrels, 7 years old, Eclipse horses, Trans.

SHEEP—CLASS I.—LONG WOOLED.

Best Buck.—1. L. J. Van Alstyne, Canajoharie, \$10—2. E. H. Ireland, Watervliet, \$5.

Best 5 Ewes.—1. Wm. Rathbone, jr., Springfield, \$10.

CLASS II.—MIDDLE WOOLED.

Bucks.—Z. B. Wakeman, Herkimer, \$10—2. J. McD. McIntyre, \$5—3. Z. B. Wakeman, Am. Shep.

Best Ewes.—1. Z. B. Wakeman, \$10—2. do. \$5—3. J. McD. McIntyre, Am. Shep.

Best 5 Lambs.—1. Z. B. Wakeman, \$5.

CLASS III.—MERINOS AND THEIR GRADES.

Best Bucks.—1. Joseph Blakeslee, Salem Centre, Westchester co., \$10—2. John B. Holmes, Saratoga, \$5—3. Daniel S. Curtis, Canaan, Columbia co., Am. Shep.

Best Ewes.—1. Joseph Blakeslee, \$10—2. D. S. Curtis, \$5.

CLASS IV.—SAXONS AND THEIR GRADES.

Best Bucks.—2. Joseph Haswell, Hoosick, Rensselaer co., \$5—2. W. Joslyn, Buskirk's Bridge, Rensselaer co., \$5—3. Hiram Whitlock, North Salem, Westchester co., Am. Shep.

Best Ewes.—2. Wm. Joslyn, \$5—2. J. L. Randall and Sylvester Milliman, Clay, Onondaga co., \$5—3. Joseph Haswell, Am. Shep.

SWINE.

Large Breed.—Best Boar, 2 years old, Henry Holmes, Saratoga, \$10—Best 1 year old boar, Berkshire, Jonathan Pitney, Saratoga Springs, \$8—Best boar, 6 months and over, Jonathan Pitney, \$5.

Best sow, 2 years old, Z. B. Wakeman, Herkimer, \$10—Best sow, 1 year old, Berkshire, James Stewart, Saratoga Springs, \$8.

Small Breed.—Best sow, 2 years old, James Stewart, \$10—Best sow, 1 year old, Jonathan Pitney, \$8—Best lot of pigs, Jonathan Pitney, \$5—Second best, Nathaniel Mann, Milton, Saratoga co., Trans.

POULTRY.

Best lot of Dorking fowls, H. Vail, Troy, \$2 and Am. Poulterer—Best lot of large fowls, J. T. Blanchard, Saratoga Springs, \$2 and do.—Best pair of ducks, \$2 and do.—Lot of Poland fowls, \$2 and do.—Best and greatest variety of barnyard fowls, J. A. Brackett, \$5 and do.

FOREIGN STOCK.

HORSES—Best Stallions.—1. D. & N. Hill, Bridport, Vt., Black Hawk, \$15—2. Silas Hale, Royalton, Mass., Green Mountain Morgan, \$10—3. Spencer C. Smith, Bloomsbury, N. J., "Top-Gallant, jr.," Youatt.

Brood Mares.—1. E. H. Morgan, Rutland, Vt., \$15—2. Calvin Blodgett, "Lady Burbank," \$10—3. F. A. Wier, Walpole, "Lady Wildair," Youatt.

CATTLE.—A. H. Jerome, New Hartford, Conn., best yoke working oxen, Diploma.

SHEEP—Cotswold.—C. W. Reybold, Delaware, Diploma. **Saxons.**—S. C. Scoville, Salisbury, Conn., Diploma. **Merinos.**—Joseph Hinds, Brandon, Vt., Diploma—J. N. Sawyer, Salisbury, N. H., 3 bucks and 5 ewes, Diploma—Jacob N. Blakesly, Conn., 1 buck, Diploma.

PIOWS.—Minor Horton & Co., Peekskill, Peekskill Plow, \$10 and Diploma.

Farm Implements, Wagons, Harrows, &c.—1. Silas Briggs, Ballston, lumber wagon, \$10 and Diploma—2. Hollister, with 3 pair stee, springs, Col. Tour—3. John W. Sherman, market and spring wagon, new and ingenious construction, Trans.

Harrows.—Z. B. Wakeman, Herkimer, \$3.

Cultivators and Scarifiers.—Anthony Van Bergen, Coxsackie, \$3

Fanning Mill.—1. I. T. Grant, improvement on former mill exhibited. Silver Medal.—2. J. E. Clapper, Trans.

Horse Power.—M. S. V. D. Cook, Puttstown, \$5 and Diploma.—2. A. & W. C. Wheeler, Chatham 4 corners, Trans.

Stalk and Straw Cutter.—1. Geo. Catchpole, \$5 and Diploma.—2. Byron Denmore, Trans.

Drill Barrows and Seed Planter.—H. L. Emery, Albany, \$3.—Pennock's Seed and Grain Planter, certificate.—C. Masten, Patent Lever Drill and Grain and Seed Planter, Diploma and Trans.

Portable Grain Mills.—Chas. Ross, "Fitzgerald's Burr-stone," Trans.

Smut Machine.—Leonard Smith, Troy, Trans.

Broadcast Sowing Machine.—Peter Gleason, Trans.

Corn Sheller and Separator.—Luther Tucker, Trans.

Root Cutter.—Luther Tucker, "Ruggles, Nourse & Mason's vegetable root cutter," Trans.

Hay Fork.—L. Bachelier & Son, a very highly finished hay fork, Trans.

Mowing Machine.—F. Ketchum, Buffalo, Diploma.

Reaping Machine.—T. R. Hussey, Diploma.

Field Cultivator.—1. Doras Hinkston, South Barre, Orleans co., Diploma.—2. Nathan Ide, Shelby, do., Trans.—3. Alanson T. Odell, Royalton, Niagara co., Trans.

Seed Sower and Weeder.—Exhibited by Noadiah Moore, Chazy, N. Y., Diploma.

Corn and Cob Crushers.—Butterfield & Greenman, Utica, \$5 and Diploma.

Flax and Hemp Dresser.—James Anderson, Louisville, Ky., \$5 and Diploma.

Ox Cart.—G. B. Powell, Saratoga, \$5.

Horse Rake.—Henry Warren, Troy, \$5 and Diploma.

Ox Yoke.—1. Azor Monroe, Galway, Saratoga co., Diploma.—2. Elton Sheldon, Sennett, Cayuga co., Trans.

Saddle.—Lyman J. Lloyd, Albany, Diploma.

Grain Cradles.—Myers & Bryan, Schaghticoke, Diploma.—I. T. Grant & Co., do. Diploma.

Six Manure Forks.—Luther Tucker, (Partridge's) Diploma.

Six Hand Rakes.—Luther Tucker, "Mayher & Co., N. Y.," Diploma.

Grass Scythes.—Hiram C. White, Albion, Orleans co., made by R. B. Dunn, Wayne co., Maine, Diploma.—Six cradle scythes, Knickerbacker & Hurlbut, Saratoga Springs, Diploma.

Churn.—Nathan Parish, Rush, Monroe co., Diploma.

Portable Grain Mill and Bolter.—Charles Ross & Co., Broadway, N. Y., Diploma.—D. C. Duncomb, Rochester, Bradford's patent bolter, Diploma.

Corn Cutter.—Seth Whalen, West Milton, Saratoga co., Diploma.

Dog Power and Churn.—Allen Burdick, Moreau, Saratoga co., Diploma.

Two Hay Forks.—Deming & Hart, Farmington, Conn., of excellent workmanship and finish, Diploma.

Butter Firkins.—John Holbert, Chemung, Diploma.—Wm. Trap, r., Ithaca, Diploma.

Cheese Press.—T. Burch & Co., Little Falls, (Kendall's patent,) certificate.

Best collection of Agricultural Implements.—Luther Tucker, \$10 and Diploma.

PLOWING MATCH.

1. Flavel Shattuck, Galway, \$15.—2. John Smylie, West Galway, \$12.—3. James McDougall, Argyle, Washington co., \$10.—4. Howard Delano, Mottville, Col. Tour.—5. John Newland, Wilton, Saratoga co., Trans.—G. W. J. Bronson, Amsterdam, (special) Col. Tour.

Boy 18 years old.—George Wesley Steves, Milton, Saratoga co., \$10.

DAIRIES.

Butter.—O. C. Crocker, Union, Broome co., for best lot in 30 days, 242 lbs. from 5 cows, from 13th June, \$25.—E. R. Evans, Marcy, Oneida co., for 2d best lot in 30 days, 216 lbs., from 11th August, \$15.—John Holbert, Chemung, for best 25 lbs. made in June, \$10.—O. C. Crocker, Union, 2d best, Col. Tour.—Hamilton Morrison, Montgomery Orange co., 3d best, Vol. Trans.—B. A. Hall, New Lebanon, for best 50 lbs., made at any time, \$15.—O. C. Crocker, for 2d best, \$10.—Stephen C. Hays, Galway, Saratoga co., 3d best, Col. Tour.—John Holbert, Chemung, 4th best, Silver Medal.

CHEESE.—Wm. Keese, Ausable, Clinton co., for best 100 lbs., 1 year old and over, \$15.—T. Burch, Little Falls, Herkimer co., 2d best, \$10.—T. Burch, for best 100 lbs. less than 1 year old, \$15.—Wm. Keese, 2d best, \$10.—Henry Lincoln, Greenfield, Saratoga co., Silver Medal.—Newberry Bronson, Wyoming, 4th best, Wash Letters.—Wm. Angles, Cobleskill, 5th best, Vol. Trans.

SUGAR.—H. Davenport, Copenhagen, for best 25 lbs. maple sugar, \$10.

SILK.—Mrs. Lewis Westcott, Greenfield, Saratoga co., for best cocoons and silk sewings, \$10.—Mrs. S. J. Pierce, Burlington, Vt., for two white handkerchiefs and black long shawl, Diploma and Downing.

DOMESTIC MANUFACTURES.

George W. Henry, Martinsburg, Lewis co., for best woolen blanket, very superior, \$5.—Albert L. White, Rutland, Jefferson co., 2d best, \$4.—Mrs. B. R. Voorhees, Amsterdam, 3d best, \$3.—Wm. Wilson, West Milton, 4th best, Trans.—Seth Whalen, 5th best, Trans.—George W. Henry, Martinsburg, Lewis co., for best 10 yards flannel, \$5.—Mrs. L. D. Scoville, Monroe co., 2d best, \$4.—Wm. Dunning, Greenfield, Saratoga co., 3d best, \$3.—Nelson P. Jordan, Malta, for best 10 yards woolen cloth \$5.—Mrs. B. R. Voorhees, Amsterdam, for best woolen carpet, \$5.—Stephen C. Hays, Galway, Saratoga co., 2d best, \$4.—Mrs. L. D. Scoville, Monroe co., 3d best, \$3.—Mrs. Benj. Russell, Saratoga co., for best hearth rug, \$5.—Joseph Wood, Greenfield, Saratoga co., 2d best, \$4.—Mrs. L. D. Scoville, Monroe co., 3d best, \$3.—P. R. Waterbury, Saratoga Springs, 4th best, \$2.—B. A. Hall, 5th best, Trans.—Mrs. Jo-

seph Daniels, Greenfield, for best 10 yards linen cloth, \$5.—Mrs. Jane Harrell, Rensselaer co., 2d best, \$4.—Mrs. L. D. Scoville, Monroe co., linen diaper \$5.—Ezra Westcott, Milton, Saratoga co., kersey, \$3.

Rag Carpet.—1. Jacob Ambler, Saratoga Springs, \$3.—2. J. Moulton, West Troy, \$2.—3. Mrs. William Newcomb, Puttstown, Trans.

Carpet Coverlet (double).—1. C. R. Nichols, Darien, Genesee co., \$4.—2. Joshua Bliven, Saratoga Springs, \$3.—3. Miss Delia A. Jones, Westmoreland, Oneida co., \$2.—4. Joseph Wood, Greenfield, Trans.

Linen Stockings.—1. Mrs. B. R. Voorhees, Amsterdam, \$2.—2. Mrs. Felix Thomas, Trans.

Woolen Knit Stockings.—1. Mrs. B. R. Voorhees, \$2.—2. Haskins, Stillwater, Trans.—3. Wm. Dunning, Greenfield, Trans.—4. Mrs. Esther Root, Saratoga Springs, (87 years of age,) \$2 and Diploma.

Diplomas were awarded to Utica Mills for 5 pieces superfine broadcloth, (W. C. Churchell.)

Seneca woolen mills; 4 pieces of cassimere, (Wm. Langworthy, agent.)

Palmer & Co., N. Y., handsome specimens tapestry.

Timothy Bailey, Cohoes, very fine specimens of drawers and wrappers.

Scotfield, Capron & Co., Walden, Orange co., two pieces superfine broadcloth from American wool.

Wool-grower's Manufacturing Company of Little Falls, M. W. Priest, agent, two pieces broadcloth, made from native wool.

NEEDLE, SHELL, AND WAX WORK.

Embroidery.—Miss Caroline Pierrepont, Troy, \$3 and Silver Medal.—2. Miss Olivia Slocum, Troy, \$3.—James R. Westcott, Sar. Springs, fire screen, \$2.—Charles Damarest, Rochester, bed quilt, \$2.—Miss Rebecca W. Allyn, Rochester, piano cover, \$2.—Mrs. Polly B. Westcott, of Greenfield, for two quilts, silk bead purse, and other articles, \$3.—Mrs. Wm. Dunning, of Greenfield, for linen table cloth and other articles, \$2.—Miss Helen Hodgeboom, Scho-dack, ottoman covers, \$1.—Mrs. B. R. Voorhees, Amsterdam, for a ingeniously wrought vest, from the listing of premium cloth presented Henry Clay, \$1.—To the same, for a large variety of articles of her own ingenuity and industry, \$10 and Silver Medal.—Mrs. James M. Andrews, Sar. Springs, for a boy's coat, \$1.—Mrs. D. Shepherd, Sar. Springs, for an infant's blanket, \$1.—Miss Amanda Ensign, Sar. Springs, watch case, \$1.—Miss Sarah M. Davison, Sar. Springs, worsted work, \$1.

Quilts.—1. Mrs. John Cramer, 2d. Waterford, worked quilt, \$2.—2. Miss Nancy A. Gregg, Waterford, worked quilt, \$1.—Rundell and Leonard, Troy, specimen of needle work, and best made shirts, \$5.—Miss Jasena Bronson, Amsterdam, port-folio and table cover, \$2.—Mrs. Sarah Churchill, New Lebanon, veil, \$1.—Mrs. Wasson, (77 years of age) counterpane, \$2.—Harvey Davis, child's knit coat, made by his daughter, \$1.—A. A. Lansingh, Albany, shirts, &c., \$2.—Miss Gould, Moreau, embroidery, \$1.—Miss Eliza Benedict, Ballston, fancy bed quilt, \$2.—Miss Leggett, Sar., swans-down muff and tippet, \$1.—Miss Frances Ann Green, Mayfield, Fulton co., shell work box, \$3.—Miss Harriet Berry, Sar. Springs, cotton knit table spread, \$2.—Mrs. Eliza Whitford, Sar., embroidered lace veil, \$2.—Mrs. Washington Putnam, Sar. Springs, specimen needle work, \$2.—Miss C. A. Waterbury, Sar. Springs, embroidered hearth rug, \$2.—Mrs. Wm. Hill, album quilt, \$1.

FLOWERS.

Professional List.—Greatest variety, James Wilson, of Albany \$5.—Greatest variety dahlias, James Wilson, \$5.—Best 24 dahlias, James Wilson, \$3.—Greatest variety of roses, James Wilson, \$5.—Best 24 blooms, Thos. Ingram. \$3.—Greatest variety of verbenas, James Wilson, \$3.—Best 12 varieties of verbenas, Thos. Ingram, \$2.—Greatest variety German asters, Wm. Newcomb, \$3.—Greatest variety pansies, James Wilson, \$3.—Best 24 blooms, Thomas Ingram, \$2.

Amateur List.—Greatest variety, Mrs. Washington Putnam, Silver Medal.—Greatest variety dahlias, Wm. Newcomb, Silver Medal.—Best 12 blooms, Miss E. Clarke, Sar. Springs, Horticulturist.—Greatest variety roses, Mrs. E. C. Delavan, Ballston, Silver Medal.—Best 6 phloxes, Dr. Herman Wendell, Albany, Horticulturist.—Best Seedling phloxes, Dr. Herman Wendell, Wash. Letters.—Best 12 verbenas, Dr. Herman Wendell, Horticulturist.—Best 12 Seedlings, Dr. Herman Wendell, Horticulturist.—Greatest variety German asters, Mrs. Newcomb, Horticulturist.—Greatest variety pansies, Mrs. Truman Mabbitt, Halfmoon, Horticulturist.

General List.—Best collection greenhouse plants, Mrs. J. Ford, Sar. Springs, Silver Medal.—Best floral design, J. Dingwall, Albany, Silver Medal.—Best ornament, Mrs. T. Mabbitt, Silver Medal.—2d best, James Wilson, Albany, Col. Tour.—3d best, Mathias Tillman, (gardener to Dr. Wendell,) Horticulturist.—Best flat hand bouquet, James Wilson, Albany, Horticulturist.—2d best, T. Ingram, Sar. Springs, Wash. Letters.—3d best, Miss Sarah M. Davison, Sar. Springs, Downing.—Best round bouquet, James Wilson, Albany, Horticulturist.—2d best, T. Ingram, Sar. Springs, Downing.—3d best, Mrs. Dr. J. Clarke, Sar. Springs, Downing.

FRUIT.

Apples.—E. C. Frost, Catharine, Chemung co., for Dowse apple for cooking and winter use, worthy of further attention; Holland pippin variety of fall apples; Riley apple, of the fall pippin variety, worthy of note—requested for future exhibition, Diploma.—Wilson, Thorburn & Teller, 18 varieties, (9 approved)—Truman Mabbitt, 4 varieties early apples—"Early Harvest," "Yellow Bough," "Strawberry," Downing.—H. N. Langworthy, per J. Allyn, 4 varieties—Henry Vail, Troy, 27 varieties, 23 approved: 2d premium, \$5 and Downing.—J. W. P. Allen, Oswego, 5 varieties, all approved, Downing.—J. L. Randall, Lysander, 31 varieties 19 approved, Downing.

Pears.—1. C. Reagles & Son, Schenectady, largest and best variety, Downing, colored plates.—2. Dr. H. Wendall, \$5 and Down

ing—3. Wilson, Thorburn & Teller, Trans.—Best collection autumn pears, J. W. P. Allen, Oswego, \$5 and Downing—J. W. P. Allen exhibited a remarkably fine specimen of a limb of Oswego Beurre, loaded with fruit, styled by the committee "Seedling No. 1,"—commended to special notice, and to which they award a Diploma—Prof. Ives, New Haven, Conn., presented a small seedling early autumn pear of high flavor, Downing—L. Prevost, Astoria Nursery, for a splendid specimen of Duchesse d'Angouleme, grown on quince stock, Diploma—Isaac Rapalje, Astoria, presented fine specimens of the Rapalje Seedling, a new pear, which on the sea coast may prove a substitute for the White Doyenne, Downing—H. N. Langworthy, by J. Alleyn, of Rochester, fine specimens of Onondaga pears, Diploma.

Peaches.—Best 12, A. Snyder, Kinderhook, \$2 and Downing—2d 12, Enoch H. Rosekrans, Glens Falls, Downing—Best Seedling variety, Oliver Phelps, Canandaigua, large yellow cling, \$3 and Downing—James Mills, Poughkeepsie, beautiful specimen pine apple cling, extraordinary size and flavor, Diploma—Prof. A. H. Stevens, N. Y., presented several large and beautiful specimens of the N. Y. white cling stone, grown in his garden at Astoria, Downing—Jerry Warner, Springfield, Mass., fine specimen Seedling peaches, from a tree 3 years old, by J. Stafford, Diploma—E. P. Prentice, Mt. Hope, 12 fine specimens of Bergen's yellow, Diploma—H. N. Langworthy, by J. Alleyn, Rochester, fine specimens of Royal Kensington and yellow melacoton, Diploma.

PLUMS.—Best collection—1. S. C. Groot, Schenectady, 25 varieties, \$5 and Downing—2. H. Wendell, Albany, 20 varieties, \$5 and Downing.

Best six varieties.—1. S. C. Groot, \$3 and Thomas' Fruit Cult.—2. Dr. Wendell, \$1 and Thomas' Fruit Cult.—Abel Whipple, Lansingburgh, for best Seedling, known as Locofoco, \$5 and Downing—S. C. Groot, for best 12 plums, \$1 and Thomas' Fruit Cult.

NECTARINES AND APRICOTS.—Best and greatest variety.—1. H. Snyder, Kinderhook, \$3 and Downing—2. Dr. Wendell, \$2 and Thomas' Fruit Cult.—Col. Young, of Ballston, presented some specimens of nectarines produced from the peach stone.

Quinces.—1. Best 12 of any variety, Dr. R. T. Underhill, Croton Point, \$3 and Downing—2. Robert McDonnell, Greenfield, Saratoga county, \$2 and Downing.

Grapes.—1. Best and most extensive collection of native, Daniel Ayres, Amsterdam, \$5 and Downing—2. J. C. Hubbell, Chazy, Clinton co., \$2 and Downing—1. Best dish of native, R. T. Underhill, Croton Point, Thomas' Fruit Cult. and Diploma—2. Wm. C. Sage, foreign and native, Downing—Col. Thomas H. Perkins, of Boston, sent a box containing bunches of eight varieties of foreign grapes, extraordinary fine specimens, grown under glass in his garden at Brighton—sorts, Nice, two varieties, St. Peters, Black Hamburg, White Frontignac, West St. Peters, Grizzly Frontignac, White Muscat, Muscat of Alexandria; also some beautiful Nectarines of remarkable flavor and growth, produced under glass, Boston, Red Roman, and Norrington, Diploma and a letter of thanks.

Special commendation to Mrs. Voorhees, of Amsterdam, for a bottle of choice gooseberry wine, of her own manufacture.

To John H. Waring, for best peck cranberries, (superior specimen.) \$5.

VEGETABLES.—To N. H. Waterbury, Sar. Springs, for 12 best ears seed corn, \$1—1. Best $\frac{1}{2}$ peck table potatoes, C. R. Nichols, Darien, Genesee co., \$1—2. H. Morrison, Montgomery, Orange co., \$1—Greatest and best variety of Seedling potatoes, Rev. N. S. Smith, Buffalo, (30 varieties,) \$10—Thomas Cody, Saratoga Springs, for 3 best heads of cabbage, \$1—N. H. Waterbury, for best 12 carrots, \$1—N. H. Waterbury, for best 3 squashes, \$1—Truman Mabbett, for best 12 tomatoes, \$1—Thomas Cody, for best 3 egg plants, \$1—C. Schuyler, Ballston Spa, 2d best 12 ears seed corn, Trans.—C. Schuyler, for 12 best onions, \$1—A. J. Parker, Sar. Springs, for Lima beans, \$1.

PAINTINGS AND DRAWINGS.—Wm. E. McMaster, New-York, "May Queen," \$5 and Diploma—No 335. Landscape, water colors, \$5—Ambrose Stevens, animal portraits, horse and cow, \$10 and Diploma—Miss A. M. Hill, Canton Village, Onondaga co., drawing in pencil, \$5—Miss Martha Wheeler, Sar. Springs, drawing, \$5—The committee noticed with approbation several portraits by N. Cook, of Sar. Springs, among which were excellent likenesses of Judge Willard, Judge Marvin, and O. M. Coleman.

STOVES.—For Wood fire.—1. Theophilus Smith, Galway, "American Reverse draft," Diploma—2. Elisha Walter, Syracuse, "Rough and Ready," Silver Medal.

For Coal fire.—1. Wilson, Mechanicsville, Diploma—2. Anthony Davy & Co., Troy, "Washington air tight," Silver Medal.

Parlor Stoves.—1. A. T. Dunham, West Troy, "Trojan parlor stoves," Diploma—2. Vail & Warren, "Sar. air tight," Silver Medal—Anthony Davy & Co., Troy, for Summer baker, Diploma—L. Morse, Athol, Mass., stove for burning sawdust, &c., Trans—Buck's patent hot air cooking stove was exhibited, and entitled to commendation heretofore given.

DISCRETIONARY PREMIUMS.

[The Committee on Discretionary Premiums reported only in part, and intend to submit an additional report to the Executive Committee of the State Society.]

C. N. Bement, Albany, osier willow, \$5.

Mathias P. Coons, Lansingburgh, for six specimens hurdle fence, Silver Medal.

J. L. Gatchel, Elkton, Maryland, for hydraulic ram, Gold Medal.

W. Wheeler, Rockford, Illinois, for "Chandler's morticing and tenoning machine," \$5.

Beautiful models of Bee Hives, exhibited by Oliver Reynolds, Monroe co.

Joseph C. Rich, Penfield, Monroe co., Washing Machine, Trans. Gustavus White, Middle Centre, Otsego co., Potato Washer, Trans.

S. Morrison, Granville, Spinning Wheel and Reel, Trans.

J. Ball & Co., indestructible water pipe, Diploma.

Henry Brackett, Wilton, Saratoga co., well curb, Trans.

L. G. Hoffman, Albany, Egg Hatching Machine, in operation on the ground, Diploma.

R. Pomeroy, Pittsfield, Mass., for improved mail axles, Silver Medal.

Augustus Thayer, for combination pump, Silver Medal.

James N. Kelley, Rochester, cigars and tobacco, Silver Medal and Diploma.

John Lock, 31 Ann st., N. Y., shower bath, Silver Medal.

Lewis E. Close, of Saratoga Springs, a lad of 12 years of age, for a handsome and ingenious small bedstead, manufactured by himself, Silver Medal. The committee give this premium with much pleasure, to encourage industry and ingenuity in youth.

Thomas Peck, improved door spring, Silver Medal.

Wm. Bushnell, Rochester, case surgical instruments, fine finish, Silver Medal.

J. Orville Olds, deaf and dumb Institute, N. Y., elements of chi-rography, Wash. Letters.

A. Meneely, West Troy, three church bells, Certificate.

Alfred Cross, Saratoga Springs, dress coat, pantaloons and vest, Wash. Letters.

Thomas Davies, Utica, miniature steamboat, in operation at Fair—a very ingenious and beautiful article, Wash. Letters.

Diplomas were awarded to L. J. Lloyd, Albany, for one set double and one single harness, and one Russet leather travelling trunk; R. T. Norgrove, Albany, for elegantly wrought carpet bags and satchels, saddle and trunk; James Henry, jr., an educational chart; F. P. Burns, Albany, piano; James Gould & Co., Albany, sleigh and wagon; W. W. Bryan & Co., Rochester, cooper's tools; William Trapp, jr., Ithaca, stave and barrel machine; Rogers and Oakley, Albany, water proof cloth; Leonard & Bunker, Troy, a Prince Albert buggy, very neat workmanship; Albany Argillo Works, glass ware and argillo door knobs, very superior; Francis C. Young, Painted Post, Steuben co., Munsell's patent boring machine for wagon hubs; Cornelius Oakley, N. Y., for pure Turkey tobacco of the kind used in Turkey for smoking; W. Hawthorn, N. Y., collar stuffing and shaping machine; F. W. Wood, 67 Frankfort st., N. Y., and 173 River st., Troy, for superior leather beltings; W. S. Segare, Utica, window springs; David Mundell, 116 Fulton st., Brooklyn, pair gentleman's boots; Mrs. G. Anderson, Broadway, Albany, a splendid assortment of confectionary and cake; Edward Owens, Albany, surgical and dentist's instruments, and other articles, very superior; Philander Salmon, Reading, Conn., Wood's patent shingle machine; Parker & Cooke, Albany, exhibited a suit of clothes of most excellent workmanship and finish; Benjamin Bruff, Rochester, model sash fastener, a very useful invention; Troy Rolling Mill Co., railroad iron; L. E. Field, Moscow, Livingston co., metallic spoke suspension carriage wheel; B. W. Franklin, Little Falls, gold pens; Frothingham & Co., Albany, hats, caps, &c.; Flagler, Baker & Co., for portable forge and bellows.

Vols. of Transactions of the Society, were awarded to John Hemstead, Sandy Hill, blacksmith's vice; James Wilkinson, Saratoga co., harness, stirrups, &c.; Barton & Fenn, Troy, fancy soaps; Connolly & McCormick, Sar. Springs, pair boots; Whipple & Co., Sar. Springs, grave stone; John Hodgman, Sar. Springs, screw plate; Nathan Bixley, New York, gum elastic maps, &c.; H. P. Hall, Sar. Springs, Daguerreotype; Cromwell & Co., Mechanicsville, crockery; Isaac Spalding, Sar. Springs, bass viol; J. H. Welcome, New York, Diamond cement; Thompson & Howland, Cayuga co., barrel of Cayuga plaster; John Harrison, Stillwater, doorknobs, &c.; T. Lawrence, Sar. Springs, garden and fire engine; Wm. Platt, Waterford, universal chuck; Dr. E. Platt, New York, patent metallic india rubber valve, breast pump, &c.; S. Benson, apple paring machine; Anable & Smith, Albany, superior leather; Thomas Ling, Saratoga, fire engine.

Commended.—A lot of Military Trimmings, very beautifully got up, and are worthy of commendation for their execution, L. T. Boland & Co., Albany.

Some beautifully sawed lumber, exhibited by Mr. Freeman.

A splendid carriage and harness were exhibited by Le Grand Smith, of Albany, much admired.

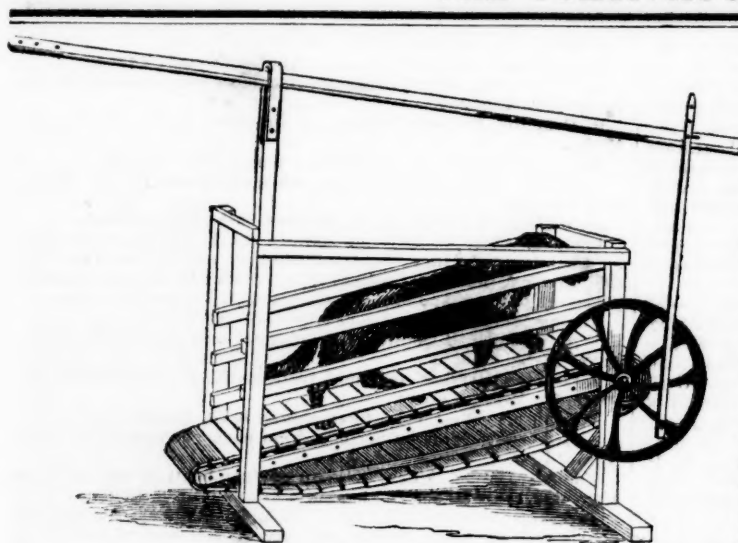
John Williams, of Rochester, exhibited two barrels flour of the well known and highly prized Whitney brand, remarkably good.

Whitney Putnam, Rochester, 1 barrel flour from the city mills, very good.

CORRECTION.—In the awards on cattle, Class I, it is said that Mr. VAIL's bull "Meteor," received a "certificate." This was not correct; and we quote from the Report of the Committee, what they did say of "Meteor," which was as follows:

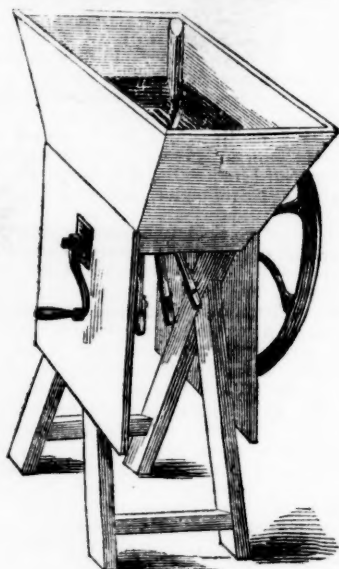
"The committee would mention here, as coming in this class, the justly celebrated Bull "Meteor," belonging to Mr. GEORGE VAIL, of Troy, which was on the ground for exhibition, only. He having taken the 1st premium at a former fair, was excluded from competing at the present. We think he stands unrivalled."

SLOBBERS IN HORSES, it is said, may be immediately cured by causing the animal affected to eat *burdock leaves*. Horses will eat them when it is bad. Some of our farmers always keep this medicine in wholesale quantities, and perfectly fresh for use.



Dog Power.—Fig. 77.

THE above cut represents a machine or power to be propelled by a dog, sheep, or other small animal, for the purpose of churning, working a washing-machine, turning a grind stone, or working small mills of any kind. It is a very simple and complete apparatus, and would be found profitable on many farms, or in many other situations. It was invented by PALMER & FROST, of Poughkeepsie, N. Y., and is sold at \$15.

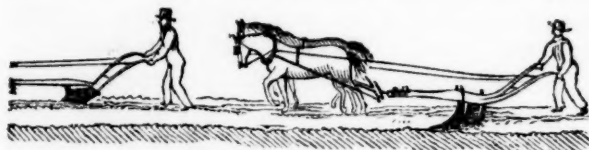


Root Cutter.—Fig. 78.

THE above is a representation of PALMER & FROST's Root Cutter. The knives are attached to the ends of arms which are fastened to a shaft, and play through the hopper containing the vegetables, cutting them into pieces about two inches long, and a third of an inch wide. The knives are so arranged that but one strikes at once, and are so placed round the shaft that they form a circle. The price of this machine is \$12.

SUBSOIL PLOWING.

WE have often expressed the belief that the practice of subsoil plowing would be attended with great



Subsoil Plowing.—Fig. 79.

advantages in many situations in this country. In England it is becoming more and more adopted, and we

can see no reason why its use should not be attended with equal benefits here. The cut at the head of this article, illustrates the manner in which this operation is performed. A team drawing the subsoil plow, follows in the furrow made by a common plow. It is proper to observe, that for subsoil plowing to produce the greatest benefits on wet, tenacious soils, they should be first under-drained.

The Journal of the Transactions of the Highland Agricultural Society of Scotland, for January, 1847, contains an account of some very valuable experiments in regard to subsoil plowing, furnished by Mr. J. WILSON. It is stated that the farm on which these experiments were made, had been under cultivation for a long period; that it consists of various kinds of soil—from

a gravelly earth to a tenacious clay. The usual depth of plowing for many years had been from five to six inches, and a hard crust had been formed at that depth.

The field first experimented on, contained thirteen acres, most of the soil being heavy, inclining to clay, on a clay subsoil, and the rest light soil, on a gravelly subsoil. It was under-drained in 1843, with tile, at the distance of fifteen feet between the drains. Previous to draining it had been very wet, and the crops it bore were generally poor. It was subsoiled in the fall of 1844, the plow going across the drains. A common two-horse plow was first used, taking a depth of six to seven inches, and a subsoil plow with two horses followed, taking an additional depth of seven to eight inches. Eleven acres were plowed in this manner, and two acres were left, which were only plowed to the ordinary depth of six and a half inches. The whole field was manured alike—the manure being from yard dung and guano—and it was sowed to yellow turneps in the fore part of June. No difference was discernible in the crop till about the first of August, when the subsoiled portion showed a decided superiority, which became more and more apparent till the crop was taken up the last of October. The subsoiled portion gave 26 tons 7 cwt. per acre, and the part not subsoiled, 20 tons 7 cwt. per acre—making a difference in favor of subsoiling of 6 tons 7 cwt., or a value of £3 18s. per acre.

The next experiment was upon a field which had been furrow-drained with tiles in the autumn of 1844; the soil rather inclined to sand on a subsoil of sandy clay. Two acres were subsoil plowed to the depth of fifteen inches in December, 1845, and two acres were only plowed to the depth of six or seven inches. Two ridges of the field were *trench-plowed* to the depth of thirteen inches. [Trench plowing is performed by running a plow of the common construction in the furrow of another of the same kind. Its operation and effects are different from those of the subsoil plow, as the surface soil is covered by the earth taken up from below by the second plow.] The field was manured alike with manure from the farm-yard, and planted to potatoes. The trench plowed part gave 7 tons, 1 cwt., 2 quarters, per acre; the subsoiled, 7 tons, 9 cwt., 2 quarters; and the part only plowed, 6 tons, 14 cwt., 1 quarter, per acre—making a difference of 15 cwt., 1 quarter per acre, in favor of subsoiling, over the part plowed only in the ordinary way; and a difference of 8 cwt. over trench plowing.

The next experiment was made on a field which had been partially drained several years since. The soil "an earthy loam incumbent on clay." A portion of the field was subsoiled, and the remainder plowed to the ordinary depth. The field was sown to barley in

1846. The appearance of the crop was most favorable on the subsoiled portion during the time it was growing, and when threshed, gave the following results:—The subsoiled portion yielded 8 quarters, 3 bushels, per acre, with $36\frac{1}{2}$ cwt. of straw; the part not subsoiled, yielded 7 quarters, 4 bushels, 3 pecks, per acre, with 28 cwt. of straw—making a difference in favor of subsoiling of 6 bushels, 1 peck of grain, and $8\frac{1}{2}$ cwt. of straw per acre.

ICE-HOUSES.

FEW persons who have ever known the advantages which ice affords during the warm season, would be willing to forgo the use of the article. It was formerly regarded as a luxury which the rich only could enjoy, but, fortunately, it is now afforded at so cheap a rate as to be within the reach of all. In cities it may readily be obtained from those who make a business of storing it for sale, and in the country each one may secure his own supply at a cheap rate. Every farmer, unless he has extraordinary advantages in regard to the use of cold spring water, and an airy, cold cellar, should have an ice-house. A reservoir formed by damming a small stream, such as almost every farm affords, will yield as much ice as will be wanted for the supply of a family. In general, however, there are ponds or streams within a few miles from which an abundant supply can be obtained.

It is now pretty well settled that ice-houses should

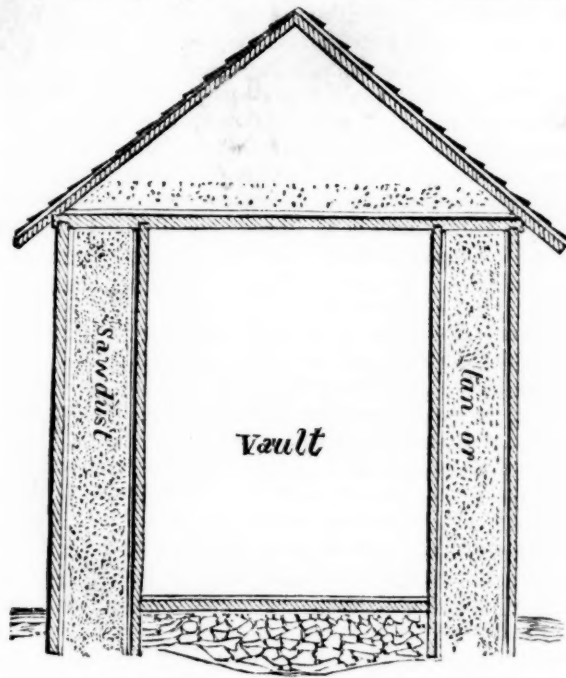


Fig. 80. Section of the Ice-house above ground.

be built chiefly or entirely above ground. Those which have generally been built by the great ice-dealers and exporters, have not been much sunk into the earth. It has been ascertained that the dampness of the ground operates against the preservation of the ice.

Mr. DOWNING, in the first volume of the *Horticulturist*, gives an extract from a letter received from Mr. N. J. WYETH, of Cambridge, Mass., a gentleman who has had much experience in the management of ice, and is largely concerned in its exportation. From Mr. W.'s letter, we take the following description of an ice-house above ground:

"An ice-house above ground should be built upon the plan of having a double partition, with the hollow space between filled with some non-conducting substance.

"In the first place, the frame of the sides should be formed of two ranges of upright joists, six by four inches; the lower ends of the joists should be put into

the ground *without any sill*, which is apt to let air pass through. These two ranges of joists should be about two feet and one-half a part at the bottom, and two feet at the top. At the top these joists should be morticed into the cross-beams which are to support the upper floor. The joists in the two ranges should be placed each opposite another. They should then be lined or faced on one side, with rough boarding, which need not be very tight. This boarding should be nailed to those edges of the joists nearest each other, so that one range of joists shall be outside the building, and the other inside the ice-room or vault. (Fig. 81.)

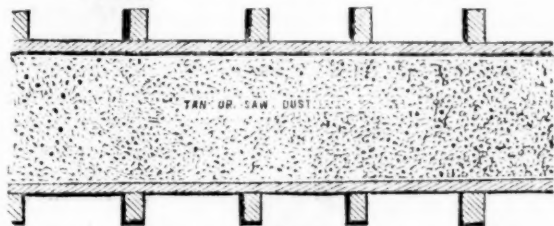


Fig. 81. Manner of nailing the boards to the joists.

"The space between these boardings or partitions should be filled with wet tan, or sawdust, whichever is cheapest or most easily obtained. The reason for using *wet* material for filling the space is, that during winter it freezes, and until it is again thawed, little or no ice will melt at the sides of the vault.

"The bottom of the ice vault should be filled about a foot deep with small blocks of wood; these are levelled and covered with wood shavings, over which a strong plank floor should be laid to receive the ice.

"Upon the beams above the vault, a pretty tight floor should also be laid, and this floor should be covered several inches deep with dry tan or sawdust. The roof of the ice-house should have considerable pitch, and the space between the upper floor and the roof should be ventilated by a lattice window at each gable end, or something equivalent, to pass out the warm air which will accumulate beneath the roof. A door must be provided in the side of the vault to fill and discharge it; but it should always be closed up higher than the ice, and when not in use should be kept closed altogether."

ACTION OF WHITE LEAD WITH OIL.—Every one may have noticed that paint in which white lead is mixed, after it has been applied awhile, cracks, and scales off. This is explained by the fact that lead exerts a chemical action on oils, in consequence of which the oil, when in combination with the lead, continues to harden, until at last, under the various changes of the atmosphere, it becomes brittle, breaks into scales, and cleaves off. On account of this action, it is thought that no white lead should be put into what is called the "priming" coat, in painting buildings or articles which are not designed to be white. Black paint is more durable than white. This may have been noticed where, as on guide-boards, &c., black letters have been formed on a white ground. The black remains perfect long after the surrounding parts have mouldered away, leaving the letters standing in "relief." This is explained as follows: The black paint is made chiefly of lamp-black, which substance is nearly pure carbon, and is known to be one of the most imperishable substances in nature—that it is not changed by the vegetable in combination with which it is used as paint, in consequence of which the slightest film of the compound is a most durable protection against the destructive influences of the weather.

CROPS IN ILLINOIS.—The crops in Bureau co., average the present season, 15 bushels per acre for wheat, 40 for corn, and 40 to 50 for oats.

THE FARMER'S NOTE BOOK.

HEATING HOUSES BY HOT AIR FURNACES.—I saw in a late number of the *Cultivator*, a very interesting communication from GEO. GEDDES, on the subject of warming houses, in which was illustrated most of the many superior advantages of the hot air furnace, when rightly constructed, which not only combines the advantages of the open fire place and the close stove, but greatly adds to the benefits of both, without partaking, in the least, of any of their evils. My object now is to tell my experience, which will verify all Mr. GEDDES says in favor of his furnace, and perhaps suggest some new ideas that may be useful to our farming communities, who have heretofore seemed to think that such luxuries did not belong to them, or they would have enjoyed them long ago, if it were for no other reason than the saving of expense. My furnace is built very much like Mr. GEDDES', only the stove is wholly within the vault, which has a shut iron door, such as is spoken of by him as an improvement; the vault is as small as is convenient for putting up the stove within it, being about one foot spare all around; the stove is four and a half feet long, twenty-two inches high, and fourteen inches wide. The hot air chimney, in which the smoke-pipe is enclosed, rises two and a half feet above the first floor, in one corner of the dining room, where there is an offset covered with a cast iron plate, with a boiler hole directly over an elbow in the smoke-pipe, which affords sufficient heat to boil water in a short time, in cold weather. The hot air chimney then continues two and a half feet above the second floor, where there is another offset, as before, in the parlor above, over another elbow in the smoke-pipe, which turns into the smoke chimney. There are nine rooms, five of which come in contact with the hot air chimney, in which there is an opening near the floor to each, so that the whole are sufficiently warmed, without pipes to convey the heat from the furnace below; the other rooms are bed rooms, and open into these five, and are sufficiently warmed, by leaving the door ajar, for all comfortable purposes—the hot air, being crowded into the main room, finds its way into the bed room sooner than it would if every crack and crevice in the bedroom, as well as the parlor, were called upon to furnish a supply of air for an ordinary fire place, or if the parlor was heated by a tight stove, which ensures no circulation of air at all.

The first cost of my whole apparatus, was much less than I could have prepared for heating five principal rooms, saying nothing about the saving of wood, which is considerable, the preparing it for small stoves, which is more, the time making fires, the room occupied by the stove and wood-box, the dirt which is unavoidably accumulated, and the blacking of stoves, &c., which are all minor considerations, when we speak of the health and comfort, afforded by a wholesome, comfortable, summer air, circulating through the whole house, both night and day, all winter; and, instead of feeling a draft of cold air, which is driven out through every crevice, by the hot air rising, and continually forcing its way into the room, from the furnace below. I have enjoyed these luxuries only three years past, and I consider I am fully recompensed for the loss of our former dwelling by fire, which required five stoves, and more expense for pipe alone, than the whole cost of our present heating apparatus, to render life any way tolerable, compared with the comforts of our furnace, in the winter season.

There have been numerous failures in the construc-

tion of hot air furnaces; they seldom have heating surface sufficient for the heat required, and generally have too much space in the vault around the stove. The heating surface should be so proportioned to the heat required, as not to require a red heat from every part. There is more or less vegetable matter floating in the atmosphere at all times, in the shape of dust, which, coming in contact with red hot iron, becomes charred or scorched, and rendered very unwholesome to breathe, which is the cause of the peculiar smell that arises from a red hot stove. If the space be too large about the stove, there is a loss of heat, occasioned by the circulation of air in the vault, before it is admitted into the room above; but if the space be so small, as to give a sufficient velocity to a constant current of air, in contact with the stove, more heat will be conveyed from the heated surface, which will be kept at a lower temperature, compared with the heat imparted, than when the space is larger. D. S. HOWARD. *Lyonsdale, 14th April, 1847.*

CULTURE AND PREPARATION OF SUMAC.—I observe in the December number of the *Cultivator*, some remarks respecting sumac, which I am induced to notice, having while a resident in Montreal, and during the period that I filled the Vice chair of the Natural History Society in that city, been instrumental in causing a prize to be offered for an essay on the best mode of preparing that and many other articles suited to the arts. I regret to say the Society was unsuccessful in its object.

Sumac, strange to say, is imported from Sicily into the United States. In the price current, published in the *New-York Journal of Commerce*, of the 14th December, it is quoted—

Sumac.....	Sicily.....	Ton....	\$45 to \$48.50
Do	American....	"	"

This latter line looks as if no American was to be procured, although, as you perceive, the price, \$2.25 per cwt., is nearly as high as the farmer gets for his wheat. Surely if it can be made at little expense, and in large quantities, it should not be so sadly neglected.

The mode of preparing sumac consists in cutting down the shrubs during winter, so as to have a thick under growth of young shoots; to cut these young shoots down in summer when in full vigor, to allow them to dry; and then to grind them in a bark mill. It is the bark and the young wood which form the drug, not the leaves.

The sumac thus imported into New York, is also imported from thence into Canada, for the use of the tanneries, although growing along side them. I was curious to know the peculiar properties of sumac as a tanning material, thus to be procured at a great cost and much trouble. I knew that it was used in Great Britain; but there of course all tanning materials are scarce. I found that sumac renders hemlock-tanned leather as light in color as the oak-tanned, and what is more important, as impervious to water, and as durable. The leather is about four-fifths tanned with hemlock, and then finished with sumac.

Sumac can be employed as a yellow dye, but is fugitive, and but little in request, Quercitron bark being superior in every respect. Its chief importance, in addition to its use as a tanning material, being to prepare light skins, as morocco and the very finest calf skins. Its effect arises from the Gallic acid contracting the pores of the skin, thus rendering it hard and waterproof—it lightens the color of the hemlock-tanned

leather from the usual effects of acids on coloring matters.

Sumac is also used in Britain as a dye for slates, and various neutral colors, especially by calico printers; also in dyeing black cloth to save galls, and to give a certain degree of softness to the shade—a slight tinge of yellow, in fact. It answers many of the purposes for which nut-galls are required.

An article that sells nearly at as high a price as wheat, at one-tenth the cost, deserves consideration. It might form an important export. The American Sumac, I am told, is inferior to the Sicilian—owing to its not being the right kind. Surely some seed could be easily procured through the U. S. consul at Palermo.

Madder, Weld, and Woad, ought also to be cultivated extensively on this Continent. The soil and climate are both fully as favorable as in the countries whence they are imported. Woad might be so prepared as to surpass the finest Indigo—indeed, a real Indigo of far finer color than any now to be procured, could be made from it. These are points deserving every attention. ZEA. *Hamilton, Canada West, 24th December, 1846.*

PRESERVATION OF CABBAGES.—A correspondent in the May number of the *Cultivator*, inquires touching the best mode of preserving cabbages through the winter. I have a plan which ten years' experience has shown to be a very good one; but whether it is the best, or even a novel one, to most of your readers, I will not pretend to decide:—

I let my cabbage stand until late in the season, and (if I discover no symptoms of rot) until we have unmistakable signs of the appearance of winter. I choose the driest part of my garden or field, and with spade or hoe dig holes in rows, say two feet apart, just large enough to receive about two-thirds of a cabbage head. I select one of the largest and most solid heads, pull it up by the roots, wrap it up in the large coarse leaves, that grow to the stalk, and *chuck* it into one of the holes, with the stump inclining upwards, at an angle of 45 degrees, or even placed vertically. Nothing now remains but to shovel on two or three inches of dirt, and press it down upon the head and around the stump, a few inches of which may be left above ground, to mark the spot, and serve as a handle to pull the cabbage up by. Treated in this way, I have found them finer by far—fresher, tenderer, sweeter—than when gathered in the fall, and have never lost a sound head. I have gone out in March, when there was three feet of snow on the spot, and with shovel and crow-bar, have exhumed such cabbages as would have made your correspondent's mouth water, and long after the frost was out of the ground, I have found them equally good. This mode is attended with some more labor, than that of huddling them into large holes or trenches, or hanging them up in the cellar, but to those who are fond of fresh cabbage in the spring—and I confess to an especial fondness for the same, having spent many years in the capacity of a *tailor*—the extra pains is labor well bestowed. N. H. *Ballston Spa, June, 1847.*

PROPER TIME FOR CUTTING TIMBER.—In the June number of the *Cultivator*, I notice a few remarks from "Agricola," on the subject of cutting timber, in which he says, that early in March, 1846, they cut timber (chestnut) which was frozen hard, and that sprouted well the ensuing summer. He also inquired what could make the difference between his experience and that of my own, in the article to which he refers.

In reply to our observing friend we will say, then, that as his own remarks go to show the early part of March, 1846, partook very distinctly of much of the character of mid-winter—at any rate his chestnut timber was frozen hard when he cut it—that was the case

with timber in our own surroundings; and more, the snow was from three to four feet deep upon a level with us, until, probably, the 10th or 15th of the month. Of course there was no great amount of freezing and thawing about those days; but, on the contrary, the temperature savored more of that of December than of March.

The fact he notices was observable with us. Considerable chestnut and other timber was cut down, while frozen, early in March, and from those stumps, made under all circumstances like those of trees fallen in the heart of winter—except that the days and nights to pass away before the time of the expanding leaf, were to be fewer than when the chopping was done at an earlier season—sprouts started and grew vigorously the coming season.

Nor is this, in any way, derogatory to the fact that we then asserted in 1846, but merely a different result, arising from different circumstances. Had his timber been in a condition like that of ours, when he cut it down, we think it very probable the same effect would have been produced. But when timber is frozen hard, and *bleeding* takes place at the time of cutting—for there is very little, if any, circulation of sap at that time in the timber, more than there is in the flow of water on the surface of a river, when it is thoroughly converted into a mass of ice. Perhaps we may venture to suppose, that previous to the process of thawing in the timber or stump, the sap vessels, at the point of disintegration, became seared, or so callous as to prevent a serious loss of the sap. At any rate, the tubes or vessels through which the sap ascends, cannot be in that perfect state for rapid action in which it is found when the root is sending up materials for new foilage and new growth.

Since we are upon the subject, we will say, as it often happens that timber must, for convenience if never from necessity, be cut in seasons when the sap is in full flow, to those who are careful of their timber lands, it must be a desideratum to use efficient means to prevent the loss of sap by excessive flowing, and consequently the loss of new shoots, which should be sustained and nourished by the old roots until they can prepare themselves to draw nourishment from their own resources. To do this effectually, it is only necessary to cover the stump with some substance—no matter what—that will close the pores, and thus prevent the waste which ends in total loss. We have effected this object by simply smearing the surface of the stump with muck in its naturally wet state, and clay is very good, when worked to a salve consistency; but the best panacea of all that has come within my observation, is to take soft manure from the cow stable, and mix it in equal parts with almost any loamy earth, and worked so as to spread freely but firmly over the wounded part. Of the healing qualities of the former substance there can be no mistake in the minds of those who have witnessed its efficiency, and the latter seems to give it a consistency which renders its continuance on the parts where applied as durable as necessity requires.

Notwithstanding the almost boundless forests in many parts of our country, there is no question but the protection and preservation of timber lands is yet to become a great question in our national economy. Indeed, it may well be so now in many sections of almost every one of our lovely sisterhood of States, and with our increasing population, rolling like a great flood in every direction, and our manufacturing enterprises, building cities by every waterfall, and exploring the earth for its secret treasures under every mountain and along every valley, its importance *must increase*. Prudence, then, dictates that, although an abundance *await us* from that already grown for every

needful supply, that a due regard to the well being of another age, we regard this subject with liberal views, and act with a benevolent and just reference to their comfort and interest. W. BACON. *Richmond, Mass., 1847.*

IDE'S WHEEL CULTIVATOR.—In the September number of the *Cultivator*, is an engraving of "Ide's wheel Cultivator and wire grass Plow," an advertisement of which appeared in the August number of your paper.

From the name, I was led to suppose, that it was fitted to eradicate that pest of the farmers, "wire grass;" but as neither you, nor Mr. IDE in his advertisement, say anything on the subject, but in enumerating its advantages leave that wholly out, I am left in doubt. If this cultivator will eradicate wire grass, witch grass, and other tough rooted grasses, it will prove a very useful invention. Will you, or Mr. IDE, have the goodness to inform me, whether this implement justifies its name, "wire grass plow?" Where it can be procured, and at what price? From its description, I conclude it is to be used for the second, or cross plowing.

I think if persons, who have newly invented implements to sell, would, in their advertisements, be a little more particular as to the properties of the implement, and would name the price, it would save much trouble; and probably would, in many cases, ensure their sale. When a farmer sees a new implement advertised, he wants to know its properties and price; and then he will be able to judge whether the proposed benefit and his means will justify the expense. P.

LIME AS MANURE.—Lime appears to have succeeded much better as manure in some regions of the country than in others. The eminent success which has attended its use in many places, should induce a trial, at least throughout the country.

Two communications have appeared in the *Ohio Cultivator*, describing its very successful application, of which the following is the substance:—The first experiment was eight or nine years ago, with three acres of old, worn-out field, the soil clayey, with some loose sand stones. It was applied at the rate of 100 bushels per acre, after the land was plowed, and before it was harrowed, for corn. The corn on the limed ground was nearly twice as heavy as on the rest. The same was true of the oats that followed the corn; and of the wheat after the oats; and of the clover after the wheat, where the heavy growth indicated to a foot where the lime terminated. A subsequent communication from the same writer states, that lime had been applied both with and without manure. "When we put on the lime, we always put on all the manure we make, either in the spring or in the fall—which is from 75 to 100 cart-loads. Lime itself will make the ground produce about 50 per cent.—lime and manure, 100 per cent.—when we put on 100 bushels of lime per acre, which we always aim to do."

SORREL.—The same correspondent states that a sandy field, or a hill of chestnut, poplar, and hickory timber, soon after it was cleared, failed to produce much grass, or anything else than "horse sorrel." A hundred bushels of lime per acre were applied before sowing wheat, and clover sowed on the wheat towards spring. "The sorrel left about the time it saw the young clover, and has not been seen since."

Farmers who have applied lime with partial or little apparent benefit, often estimate its use erroneously, by not taking into account the long endurance of its enriching powers, which is many times that of common barn manure.

VARIETIES IN WHEAT.—Lawson describes 83 varieties in wheat; Le Couteur 150; and the Museum of the Agricultural Society in Scotland has 141 varieties.

SALES AT THE STATE FAIR.

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We are more and more convinced of the advantage of incorporating with our agricultural exhibitions, the feature of purchase and sale. If the shows were held at central and accessible points, we are satisfied that the opportunities they would afford for buying and selling live-stock of all kinds, implements, valuable seeds, &c., would go far towards keeping up the interest and insuring respectable exhibitions.

At the late meeting at Saratoga, there was a very good display of implements, and we believe that sales and orders, chiefly by a few individuals, were made to the amount of \$1200 to \$1500. The sales in live stock were also considerable. We were informed that the pair of matched horses which took the first premium were sold for \$1000, and that several other pairs were sold at fair prices, as well as several breeding mares and young horses. In cattle, there was considerable inquiry for young Durhams of good quality. Several sales were made, and more might have been made, had there been on the ground a sufficient number of such as were wanted. On account of this deficiency, several persons who wished to procure Durhams, went away without purchasing. Nearly all the Devons which were offered for sale, found purchasers. Mr. WASHBON, of Otsego county, and his associates, who exhibited stock with him, sold to the amount of about \$700—chiefly calves, at \$50 to \$75 each. Cattle of other breeds, as Herefords and Ayrshires, might have been sold had they been offered.

In sheep of all kinds, and in swine, there were but few sales, not owing to want of purchasers, but to the lack of a proper assortment.

Now, if, as before observed, these exhibitions could be made in reality *fairs*—especially for the sale of the choicest stock, and the most useful implements—the object of buying or selling would induce the people to come forward on these occasions with whatever is *best suited to the market*. This would afford a healthy stimulus, and the producer would feel safe in devoting his attention to those objects for which the marketable demand should afford the greatest profit.

We would make a suggestion in relation to another matter which we think of considerable importance. A great objection with farmers residing at a distance from the places where the shows are held, in regard to the exhibition of their stock, is the expense to which they would be subjected, while at the same time there is much uncertainty whether they would receive anything as a remuneration. To obviate such a difficulty, the agricultural society of Worcester, Mass., and some other societies, have adopted the practice of paying *travelling fees*. Such animals as the examining committees think worthy—whether they receive premiums or not—are, on their recommendation, entitled to receive a certain sum per mile for the distance they have travelled in coming to the show. Of course, inferior animals are not entitled to any such encouragement. This rule effectually does away the objection that those situated near the place where the shows are held, have all the advantage in regard to competing for premiums.

LIQUID MANURE.—The papers occasionally contain accounts of interesting and very successful experiments with liquid manure. It is indeed very valuable; but we believe a large share of the advantages result from the simple watering which the plants thus obtain. The manure itself should not by any means have all the credit, as we know very well from experience, that a simple, a regular irrigation of garden plants, has in some cases caused an increase in growth which would hardly be expected from the most copious manuring.

EXHIBITIONS OF AGRICULTURAL SOCIETIES.

FROM the accounts we have received, and from what we have ourselves observed, we believe that the exhibitions of agricultural societies have in general been better attended the present year, and have in most cases been of a more interesting character, than formerly. The inference deducible from this is, that the public are becoming more interested in rural pursuits, and that agriculture and its associated arts are assuming in the minds of the people the elevated position which they deserve. The effect cannot but be salutary on the prosperity and happiness of the country at large. It will be the means of bringing a greater mental force and energy to the cultivation of the earth, and on the sure principle that "knowledge is power," will give to the farmer and artisan greater success in their vocations, and greater influence in their social and political relations.

We had the pleasure of attending three of the exhibitions in Massachusetts and one in Connecticut, viz: Pittsfield, Springfield, Northampton, and Hartford. The little space allowed us in the present number will not admit of our entering much into detail in describing the many interesting matters which we met with at these shows. Being, therefore, under the necessity of speaking in general terms only, we trust our friends will discover a reasonable apology for omissions, in the circumstances we are placed under.

The show at Pittsfield was on the 6th and 7th of October. Finding that the show at Springfield took place on the same days, we left Pittsfield at the close of the first day, in order that we might be at Springfield in time to witness a part of the exhibition at that place. The exhibition at Pittsfield was the *thirty-seventh* which has been held by the Berkshire county society—that association having instituted the first "cattle show" in the United States, in 1810. The increasing success which has attended the long career of this society, affords unmistakeable evidence of its good management. The exhibition on the present occasion was in most respects considered as good as usual. The most interesting feature of New England agricultural shows generally is the working oxen, and the display of these at Pittsfield was quite large, and there were many valuable pairs—though, to be candid, we must say, that too large a proportion of them were large-boned, rough, and quite too coarse for profit either as feeders or workers. The objection of coarseness would also apply in some degree to the cows, yet some of them were not obnoxious to this charge, and were evidently valuable animals. There were but three or four bulls offered, and they by no means of superior excellence. There were some very fine swine, and hardly one that was not good. The sheep were not numerous, and in general of only middling quality—but there were a few good Merinos. The show in the hall was said to be not so large as that of last year. There were, however, handsome specimens of various household fabrics, dairy products, fruits, vegetables, specimens of the mechanic arts, &c. As we left on the first day, we did not hear the address or witness the plowing match.

At Springfield the exhibition was equal to former years. Not having been present on the first day, we only saw the exhibition of horses—which was uncommonly fine—and the display in the hall. The latter was altogether good, and in some respects superior. The show of butter and cheese was the best we ever

witnessed for a county society. The butter was arranged for exhibition in a manner worthy of imitation. A sample of each lot was moulded into handsome lumps and placed under a tight glass case, secure from dust and the action of the air. Apples, pears, and other fruits were numerous and of superior appearance. The show of vegetables was really very fine, comprising the finest specimens of the choicest of our culinary articles. The ornamental decorations of the hall were of a very tasteful character—the flowers especially being arranged in beautiful style. The address was delivered by Prof. C. U. SHEPARD, of Amherst College. We took some notes of it from which we shall endeavor to furnish a sketch for our next number. At present we can only say that it was highly interesting and strictly utilitarian in its character.

The exhibition at Northampton was on the 13th and 14th of October. Here, also, we were unable to spend but one day, as we were desirous of being at Hartford on the 14th. The society located at Northampton, formerly embraced the three counties of Hampden, Hampshire, and Franklin; but the former county has within a few years organized a society of its own, holding its exhibitions at Springfield.

In most departments, the display at Northampton was large, and in general it was very satisfactory. The working oxen were out in greater numbers than at any show we have attended for several years. The town of East Hampton showed a team of 39 yoke, West Hampton forty-four, South Hadley twenty-eight, and Conway twenty-three yoke. The latter team was in general appearance superior to any one of the same size we ever saw from one town. Besides these teams there were many single yoke of oxen of fine appearance. There were a few superior milch cows; but the bulls were not of a quality which would entitle them to commendation. There were a few very good pigs; but no good sheep—at least we saw none.

The display of fabrics was not large. The venerable Dr. STEBBINS, of Northampton, with unabated zeal in the silk cause, exhibited almost every description of silk article, from the cocoon to the wrought fabric, and *mulberry paper*. Fruits were especially fine, comprising specimens of the choice new pears. Vegetables were well represented. Dairy products respectable as to quantity; we were told the quality was unexceptionable.

The plowing match was contested by eighteen teams, and most of the work was executed in a creditable manner. But we shall probably speak more particularly of this and some other matters hereafter.

WORCESTER COUNTY, MASS.—The annual show of this long-established and useful society, took place at Worcester on the 23d of September. In some departments the competition was less than it has usually been. The general show of animals, however, is stated to have been very good, and that of manufactures better than last year. The show having been held a fortnight earlier than usual, and books having been offered instead of money for premiums, it is thought operated to render the show less interesting.

The show of the Worcester Horticultural Society, which took place at the same time of that of the Ag. Society, was excellent.

ESSEX COUNTY.—Show held at Lynn, September 29th. From several accounts we have seen, the exhibition appears to have been a very good one. Thirty teams were engaged in the plowing match, and there

was also a good show of working oxen. The address, by T. E. PAYSON, is highly commended.

MIDDLESEX COUNTY.—Show at Concord, Oct. 6th. The *Mass. Plowman* says—"we perceived no falling off in the number of people present, or in the live stock and manufactures exhibited. The fruits too were quite abundant and of excellent quality." The double teams in plowing were required to plow to the depth of nine inches, and the single teams (that is one pair of oxen or horses) eight inches. The address was by E. H. DERBY, Esq.—the subject, a statistical account of the business of the county.

CONNECTICUT.—The principal days of the Hartford County show, were the 14th and 15th of October, though the in-door part was kept open the greater part of the week. Without intending any flattery, the entire display may be pronounced one which did great credit to the citizens of Hartford, as well as those of the county generally. The in-door part was more extensive, and as a whole superior to any county show we ever attended. We regret that our limited space will not permit us to follow our inclinations by giving a more particular notice. We shall, however, avail ourselves of another opportunity to speak in reference to particular articles and things. The fruits of all kinds, common to the latitude, were good. Apples were very abundant, comprising many of the best varieties. Autumn and winter pears were also fine. The vegetable products numerous and good. Dairy products looked well. The fabrics were entirely "too numerous to mention."

Of cattle there were some good Durhams. A fat Durham ox, exhibited by Dr. CARRINGTON, of Farmington, for symmetry and quality, is rarely equalled by the best of that or any other breed. There were also some good Devons, and some good mixed bloods. The working oxen made a large display, and they were generally remarkably good, both as to appearance and discipline. The plowing match had fourteen competitors. The ground was so wet that it was almost impossible to plow it well. A few teams, however, succeeded in making fair work; but in most cases the furrows were too wide, were turned over too flat, and left heavy and close.

The address was by Prof. JOHN P. NORTON, of Yale College. It was a sound, practical discourse, and was evidently received with great approbation. We shall probably be able to give it to our readers next month.

NEW-HAVEN COUNTY.—Show held at Waterbury on the 6th of October. The *Waterbury American* says it was a splendid exhibition, and doubts whether "in some points of view it has ever been exceeded by any county exhibition in the Union." It is stated that according to enumeration there were about 1300 head of working oxen, or 650 yoke. There were 164 yoke from Watertown, and from Waterbury 150 yoke. At a trial of strength it is stated that a yoke of oxen belonging to J. N. BLAKESLEE, of Watertown, drew a load of stone which weighed, without the cart on which it was placed, 8772 lbs.—They moved the huge load, it is said, "very handsomely." A pair of stags, belonging to J. A. LEWIS, also moved the load. The show, altogether, passed off with great *eclat*.

LITCHFIELD COUNTY.—Show held at Litchfield on the 29th and 30th of Sept. We learn by the *Inquirer*, that in articles of domestic manufacture, and horticultural and vegetable productions, the display was not as great as in some previous years; but that the superior quality of the articles exhibited the present season, in some degree made up for the deficiency. The show of cattle, horses, and sheep, is spoken of as numerous and of the first quality. The Devon cattle of Mr. HURLBUT, of Winchester, and the cattle and sheep of Mr. BLAKESLEE, of Watertown, are highly spoken of. The latter had thirteen pair of matched oxen and steers.

VERMONT.—WINDHAM COUNTY.—Show and Fair took place at Brattleboro on the 6th and 7th of October. The *Phoenix* says—"the articles and animals exhibited were highly creditable, and many of them of superior quality—though inferior, on the whole, to those exhibited at the fair last year."

RUTLAND COUNTY.—Show at Rutland on the 29th and 30th September. The *Herald* informs us that the collection of people on the occasion was very large, and that the show "was such as no county in Vermont or in New England need be ashamed of." The address, by Hon. GEORGE P. MARSH, is very highly spoken of.

CHITTENDEN COUNTY.—Show held at Burlington on the 22d and 23d of September. From the very full and interesting account published in the *Free Press*, we have no doubt that it was a *first rate* affair. The show of animals was large—the horses, ranged in a line, extended half a mile. The show of fruits is said to have been "magnificent"—showing that the valley of Lake Champlain is not behind other sections in these productions. The show of butter and cheese was extensive. Of household manufactures more than 300 different articles were exhibited, "besides a large amount of fancy work." The address was by J. W. MAY, Esq.

NEW-YORK.—GREENE COUNTY.—The annual Fair and Cattle Show of the Greene County Society, took place at Windham Centre, on the 20th and 21st days of September, and it is said surpassed any one previously held in that county. The collection of people was large, and all seemed animated with much zeal in the cause of agricultural improvement. There were three teams of fine oxen—two of twenty yoke each, and one of thirty yoke—from three different towns, which are spoken of as having attracted much attention. There were also some fine horses, milk cows, and other stock. The address was delivered by Mr. JOHNSON, secretary of the State Society, and was received with evident satisfaction. Col. Z. PRATT, of Prattsville, the President of the Society, to whose liberal exertions its prosperous condition is in a great degree due, in introducing Mr. JOHNSON to the meeting, made some appropriate remarks, in which he referred very happily to the advantages resulting to the farmers from their gathering themselves together—making the occasion a freeman's jubilee. During the exercises many odes were sung, among which was an original one of much merit by Miss ALLEN, of Washington county.

ONEIDA COUNTY.—The exhibition was held at New Hartford on the 23d of September. It was pronounced by many the best ever held in the county. The productions of the farm, garden, and dairy, were numerous and of good quality. There was also a good show of manufactured articles. The live stock is said to have been well represented. The exhibition was uncommonly good, especially that of working oxen. An exchange paper remarks, that "in horned cattle, butter and cheese, it was evident that this excelled the late State Fair at Saratoga."

JEFFERSON COUNTY.—The exhibition was held at Watertown on the 15th of September. The weather was unpropitious, it being rainy most of the day. There was, however, a very respectable show of horses and working oxen, and at the hall appropriated for their reception, were good specimens of vegetables, fruits, flowers, and manufactured articles. Dr. LEE, of Rochester, delivered the address, which was listened to and approved by a large audience.

THE RENSSELAER COUNTY Society held its exhibition at Troy on the 22d and 23d of September. We attended on the first day, and are pleased to say that the display of the products of agriculture, horticulture, the various mechanic arts, domestic and household manufactures, &c., was such as did great credit to the citi-

zens of the county. In many respects the show was, both in extent and excellence, superior to any other county show we had previously witnessed.

The enclosure in which temporary buildings were erected for the occasion was filled—*jammed*, in fact—with people, and the animals and objects presented for exhibition. The fixtures were quite complete, in themselves, but space was wanting to accommodate so great a throng. It was estimated that the number of persons who entered the grounds during the show, was 12,000 to 15,000.

The display of fruits was uncommonly fine. The collection was quite large, embracing many rich specimens of the most esteemed varieties of apples, pears, peaches, nectarines, plums and grapes. Our limits will not admit of a detailed notice of the samples presented, but among the principal exhibitors we noticed the names of H. BURDEN, S. E. WARREN, H. VAIL and W. BUSWELL, Troy; T. BRIGGS and A. BRIGGS, Schaghticoke; W. NEWCOMB, Pittstown; A. WALSH, S. D. SMITH and A. CLARK, Lansingburgh.

The live-stock was numerous, and in each class comprised some very good animals. The show of horses was the largest and best we ever saw for a county society. There was also some good horses exhibited from out of the county, among which we noticed the "*Morgan Charger*," a compact and well made stallion, by Mr. DURRELL, of Cambridge, Washington county. Mr. LONG, of the same county, exhibited his horse "*Tornado*," and another fine blood-horse called "*Eclipse*." Very good horse stock was shown by S. M. LOWN, Mr. ECCLESHIMER, (who had fine beautiful colts—one one mare.) I. T. GRANT, H. VAIL, M. VANDERHEYDEN, and others.

There was a large number of cattle, among which were some good Durhams from the herds of Messrs. VAIL and J. H. WILLARD, Troy, and J. HASWELL, Hoosick; and many cross-bred and common cows which appeared to be good milkers. The working oxen made a large display. There were four or five teams of five pair each, from different towns, and several good single pairs besides.

The fine woolled sheep were not numerous, and the quality, with a few exceptions, not to be commended. There were some good full-blood and cross-bred South Downs, and a few superior grade long-wooled sheep.

The show of swine was good. Among them we noticed some superior ones offered by J. H. WILLARD, and H. TOLHURST, Troy.

The address was delivered by Hon. L. C. BALL, of Hoosick, and is spoken of by those who heard it, as an interesting and highly valuable production.

MONTGOMERY COUNTY.—Show and Fair held at Fultonville. It is said to have been "all that the most sanguine anticipated"—the display being pronounced superior to any previous year.

OSWEGO COUNTY.—Show at Mexico on the 29th and 30th of September. The *Times* says the exhibition furnished satisfactory evidence of the increasing interest felt by all classes in the agricultural prosperity of the county. The address by the President of the society, J. B. HIGGINS, is spoken of in high terms.

VERNON AG. ASSOCIATION.—This is a town society organized about a year and a half ago. The show for the present season was held at Vernon Centre on the 6th of October. No premiums were offered—yet we are informed that the shows have been well attended, and in horses, cattle, sheep, and swine, the display has been extensive and creditable. The exhibition of fabrics, as well as fruits, vegetables, and even flowers, was large and fine. We tender our thanks to Mr. L. T. MARSHALL, corresponding secretary of the association, for a printed account of the show.

CAYUGA COUNTY.—Show held at Auburn 29th and

30th September. It is said to have been far the best exhibition the society has ever held—"exceeding the most sanguine expectations of its friends."

DUTCHESS COUNTY.—Show held at Poughkeepsie, Oct. —. The *Journal and Eagle* states that the exhibition of cattle, horses, sheep, swine, &c., was the most extensive that has ever taken place at any of the shows in that county. The display of fruits, flowers, vegetables, articles of domestic manufacture, &c., was thought to be superior to former exhibitions. The occasion gave great satisfaction to the numerous concourse of people assembled.

MADISON COUNTY.—Show held at Cazenovia Sept. 29th and 30th. The exhibition of farm stock was less than usual. The number of people in attendance was much larger than was expected, showing that a deep interest is felt in the cause for which the society was instituted.

LIVINGSTON COUNTY.—Show at Geneseo September 29th. The *Livingston Republican* says the exhibition exceeded the highest expectations of all. The village is said to have been thronged with the multitude which assembled to witness or take part in the festivities. Hon. ALLEN AYRAULT delivered the address, which was a sensible and valuable production.

AMERICAN INSTITUTE.—The annual exhibition of this institution was held the past month, and was we think fully equal, in the department of manufactures and the arts, to any one we have attended. There was a handsome display of agricultural implements, from the warehouses of Mr. Allen, Messrs. Mayher & Co., and John Moore & Co., of New-York. In the department of agriculture, there was a fair show of butter, cheese, flowers, fruits and vegetables of various and rare kinds, Indian corn, and other grains. We were not able to attend the cattle-show until the second day's exhibition, when a portion of the stock had been, we understood, taken from the ground. From what we saw and heard, we inferred that the show would compare well with the previous exhibitions. The largest contributor to this department, we believe, was R. L. COLT, Esq., of Paterson, N. J., who had on the ground Alderney, Ayrshire and Devon cattle, white turkeys, white Guinea hens, white topknot and Muscovy ducks, black, white and spangled Poland fowls, Dorkings, Creoles, Jersey Blues, and Malays. Messrs. Bell & Morris, Lewis G. Morris, Wm. B. Oddie, of Westchester county, Dr. Poole of New-Jersey, Mr. Townsend and Mr. Blakeslee, of Connecticut, and others, had fine animals on the ground. The Messrs. Wait, of Orange county, and Mr. Halleck, of Ulster, exhibited some of their fine South Down and long woolled sheep. Mr. Wm. Stickney, of Boston, presented a boar and sow of the Suffolk breed, a sow of the Middlesex breed, just imported, and a litter of Suffolk pigs, which attracted much attention. They were all superior animals, equal, undoubtedly, to any thing of the swine kind in the country.

POTATO DISEASE.—The most learned, thorough, and patient observations of the most eminent observers, are summed up in *Silliman's Journal*, showing conclusively that this malady is not caused by an insect or fungus; and the only satisfactory result arrived at is this:—That no nation should place its dependence solely on a single crop. If there is only one leg to the stool, and that is knocked out, the sitter thereon is at once placed in imminent jeopardy.

OXEN DRAWING APART, may be prevented by connecting the horn of one ox to the horn of the other by means of a strong cord, tied at the tips of each horn. Balls on the horns render this easy. So says F. Wingate, in the *Maine Farmer*.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

TO OUR AGENTS.—We publish this month a list of Agents, for our publications, in New England and in this state, and shall publish a list of those in other states in our next. As we send no paper to any one after the year for which the subscription is paid, we are under the necessity of calling annually on our Agents to renew their efforts to obtain and forward the subscriptions of their friends. It is by these efforts alone that the circulation of the Cultivator is sustained; and while tendering our heartfelt thanks to those who have heretofore so liberally rendered us their assistance, we invite them and others, to lay us under increased obligations by extending their aid and influence to the ensuing volume. In making out the list, some names may have been accidentally omitted; but we hope no one, disposed to act as Agent, will fail to do so, even if he should not find his name in the published list.

COMMUNICATIONS have been received, since our last, from A Subscriber, O-o, Elias Cost, R. G., L. F. R., J. J. H., H. C. B., James Eaton, Ik. Marvel, Autograph.

BOOKS, PAMPHLETS, &c., have been received as follows:

Catalogue of Trees, &c., grown in the Seneca Lake Highland Nursery of E. C. FROST, Catharine, Chemung county, N. Y.—*Landreth's Rural Register and Almanac for 1848*, altogether the most valuable rural Almanac that we have met with, 100 pages duodecimo—embracing a great variety of information on all matters of interest to the farmer and horticulturist. From the publishers, LEA & BLANCHARD, Philadelphia. For sale at LITTLE's bookstore, in this city—price 15 cents.—*Seeds of the Scuppernon Grape*, from S. J. WHEELER, Murfreesboro, N. C.

We neglected to acknowledge, as we should have done in our last number, our obligation to Messrs. LEA & BLANCHARD, the publishers of the American edition of Youatt's Treatise on the Pig, for the engravings of the Portraits of different breeds of swine, with which our notice of that work was illustrated. A copy of that work should be in the hands of every one who raises pigs.

FRUIT OF AN ANCIENT TREE.—Among the fruits exhibited at the late show at Hartford, was an apple from the "old Wyllis tree," which was brought from England and planted where it now stands, two hundred and eight years ago. We saw this venerable tree; it stands within a few rods of the "Charter Oak," so renowned in Connecticut history. The apple tree has only a mere shell of the trunk, with a few small green branches; yet it bore a dozen apples, perhaps, the present season. By the kindness of some friends we received some specimens of the fruit, which may be seen at our office. The hollow in the old oak has probably increased considerably in size since it contained the Charter of the Colony, but it is still quite vigorous, and may stand another half century or longer.

RECEIPTS AT THE STATE FAIR.—The receipts at the late State Fair at Saratoga, were more than stated in our last. They amounted to \$4,034.22, being but \$298.95 less than at Auburn in 1846.

GEO. VAIL, Esq., Troy, informs us that he has recently sold a bull calf, two months old, from his imported cow, Lady Barrington III, by Meteor, to the Hon. Adam Fergusson and J. Wettenhall, Esq., of Canada West, for \$300.

APPLE OF THE GROWTH OF 1846.—G. V. S. DEN-

NISTON Esq., of this city, has left with us a Newtown pippin of the growth of last year, which is entirely sound, and bids fair to remain so for some time longer.

BLOOD BEET.—Mr. THOMAS McMILLAN, of New-Scotland, has left us a winter blood beet, weighing 6½ lbs.—divested of tops and earth.

FINE SQUASH.—We have received from Mr. EDWIN NEWBY, (No. 8, Centre Washington Market, N. Y.,) a squash of a variety which he calls the "Cream squash." The seed, he informs us, was introduced from South America, three years ago. It appears to be the same kind that we have known under the name of "Cuba squash," "Custard squash," &c. It is highly esteemed by those who are acquainted with it, both for its taste and long-keeping qualities.

IMPORTATION OF PIGS.—WILLIAM STICKNEY, Esq., of Boston, informs us that he has recently imported from England, three "Improved Middlesex" sow pigs, and one "Essex white" pig. He had intended to have imported a boar, of the Middlesex breed, but the one purchased in England died on the passage. He has, however, sent for another. Mr. S. says—"I prefer the appearance of the Middlesex to the Essex—they are larger than the Suffolks, and equally as fine." He has, at the present time, no pigs to spare except a few of the age of six to ten weeks.

We have received from Mr. THOMAS H. HORTON, of New Lebanon, a handsome sample of oats, which we are inclined to think are the White Tartarian variety.

FINE NEW PLUM.—We have received a sample of another Seedling plum from the garden of Mr. ISAAC DENNISTON, whose fine seedlings have so often attracted attention. It was in perfection the first week in October, and is an excellent plum, closely resembling the Imperial or Prince's Gage, and fully equal to it in flavor.

CRIB-BITING.—Horses sometimes contract the habit of biting their mangers, or whatever hard substance they can lay hold of. The habit results in considerable injury to the animal, in consequence, as is commonly supposed, of his sucking or drawing in air. Mr. YOUATT says the crib-biting horse is notoriously more subject to colic than other horses. He says, also, that this is one of those tricks which are very contagious and difficult to cure. The habit is so inveterate that when horses addicted to it have been turned to pasture for the purpose of curing it, they have been known, according to Mr. YOUATT, to gallop across a field for the mere purpose of having a gripe at a rail. Mr. Y. suggests that a strap buckled tightly round the neck, by compressing the wind-pipe, will prevent the horse from "cribbing."

WELLS LATHROP, Esq., of South Hadley, Mass., has a very valuable horse which has had this habit for sometime; but by the use of a small strap, fastened round the neck just so tight as to bear on the wind-pipe, he is effectually prevented from biting, and the horse is not in the least injured.

FUNGI.—Professor WAY, of Cirencester Agricultural College, thinks the celebrated *fairy rings*, known in England and Scotland, are caused by fungi, the seeds or sporules of which, from some cause or other, become deposited on the surface of the ground, and spread in circular form. He analysed the ash of fungi, gathered in one of these rings, and found it very rich in the inorganic elements of vegetable life. The fungi also

contain a great quantity of nitrogen, and when gathered and placed in a heap in warm weather, they fermented rapidly, and gave off a disgusting and putrid smell, in every way resembling that of decomposing animal matter. Some of this fungi was collected and spread in the form of letters on the grass of a pasture, and the effect was readily seen in the superior growth of the grass for a month afterwards. There is at least one species of fungus in this country, which, after exposure to the air for a few days, begins to decay, and in a short time emits a carrion-like odor, and we have seen the maggot of the flesh fly revelling in its putrescence.

IMPROVEMENT IN PREPARING WHEAT AND OTHER GRAINS FOR FLOURING.—Mr. S. BENTZ, of Boonsboro, Maryland, has invented a machine for preparing wheat for flouring, which appears likely to be highly useful. He has forwarded to the Executive Committee of the N. Y. State Ag. Society, samples of grain which have passed through this process, and the Secretary, Mr. JOHNSON, has furnished us the following account of the machine:

"The improvement consists in taking the outer coating or bran from the wheat kernel *previous to grinding*. Its advantages are said to be—improving the ordinary kinds of red wheat from 5 to 15 cents per bushel—making from them *as good and fair flour* as is now made from the best varieties. It also saves in each barrel of flour from 40 to 52 pounds of wheat. A great saving of time in grinding is secured. It produces also the best *hot climate flour* known.

"Samples of wheat as grown, and with the bran off, may be seen at the Agricultural Rooms, and the attention of farmers and millers is invited to an examination of the specimens. The Executive Committee have awarded to Mr. BENTZ a diploma. They hope to be furnished hereafter with a full account of the process, with samples, and with the results."

FONDNESS OF THE INDIAN FOR THE APPLE.—The fondness of the Indian for fruits and vegetables, has often been remarked. Mr. SCHOOLCRAFT, in his Report on the Iroquois, says, the apple is the "Iroquois banana." After the introduction of this fruit into this country from France and Holland, the Indians, "captivated," as he observes, "by its taste, lost no time in transferring it by sowing its seeds, to the sites of their ancient castles." "No one," he adds, "can read the accounts of the destruction of the extensive orchards of the apple which were cut down on Gen. Sullivan's inroad into the Genesee country in 1779, without regretting that the purposes of war should have required this barbaric act. The census will show that this taste remains as strong in 1845, as it was 66 years ago."

RENSSELAER INSTITUTE.—In publishing the report of the Board of Examiners of the Rensselaer Institute, says the *Troy Daily Whig*, we cannot omit contributing our mite of praise to their testimony in favor of the institution. If the graduates of the Institute, who lectured at Morris Place Hall, may be considered specimens of the students it sends forth to engage in practical scientific pursuits, then its cadets have nothing to fear from a comparison with those of West Point. At present, we believe, the number of students is limited to thirty. It ought to be extended to one hundred, and for this end liberal additions to the original endowment should be made. But few of our citizens know the value of the institution in their midst, which for years has been quietly furnishing some of the best practical engineers, chemists, &c., in the country. Had the Rensselaer Institute been located in Boston, it would long since have felt the effects of that private munificence of which every New England College and school of art and science, has been the recipient.

We hope one day to see this institution expanded in-

to a Polytechnic School, embracing within its circle of instruction all that is taught in the Polytechnic School of Paris.

TO PROTECT THE LUNGS IN THRASHING.—H. N. Lowry, in the *Ohio Cultivator*, gives the following mode, which is perfectly effectual. A piece of the finest *sponge*, large enough to cover the mouth and nostrils, is hollowed out so as to fit closely; a tape is fastened round and tied over the top of the head. Soak it in soft water, and then squeeze it well. When ready for work, tie it over nose and mouth, and you can breathe and talk through it almost as well as without; and in a perfect fog of dust, the air will be as clear as in a cornfield. He states that it will, however, prove troublesome to those who use the "filthy weed."

SPLENDID EVERGREENS.—J. J. Smith, of Philadelphia, states in the *Horticulturist*, that at Dropmore, near Windsor, the seat of lady Grenville, there is a great *double avenue* of immense Cedars of Lebanon—and that the *Pinetum* there, containing all known hardy cone-bearing trees, comprises 170 species.

RURAL SOUNDS.—The enlightened advocate of country life, will approve of the cultivation of a taste for the natural pleasures of a life in the country. An acquaintance with the peculiar habits, and sly tricks, not to say amusing speeches, of small animals, such as birds and bull frogs, often affords a pleasant recreation for a spare moment.

Charles Waterton, in his interesting and rather marvellous narrative of his travels in South America, remarks, that it is quite flattering that so many birds there speak English! A large portion of the birds of the United States furnish the same compliment to our language, or at least a very little imagination enables any one to translate their songs to very fair English. Every boy, almost, is familiar with the well known shout of the quail or partridge, of "Bob-White!" or sometimes, "Wash-face-white!"—and also of the Rice bird, or familiar Bob Lincoln—"Bob o'link! Tom Denny! come pay me the two and sixpence you've owed me a year and a half ago, or clear!" A southern writer, however, says that the song which the Bob o'link there most frequently utters so rapidly to his mate, is very nearly as follows:—"Bobby Lincoln—look, Mary Lincoln—velvet pantaloons and summer jacket, ho!—Bobby Lincoln won't let Mary Lincoln gad about alone over clover top, dock-weed, and apple tree—nor shall she marry Michael Mangel Wurtzel!"

A pleasant old gentleman used to say, that he often heard the common American robin, shouting out, "skillet! skillet! three legs to a skillet! two legs to a skillet!" And a certain facetious doctor, in Cayuga county, affirms, that when riding out on his professional visits, the robins usually perch on the fence stakes, or road-side trees, and address him thus:—"Kill 'em! kill 'em! cure 'em! cure 'em! give 'em physie, physie, physie!"—which it must be admitted is a very correct version of the song of most robins. A tailor once told me, what a bird said to him, and by which I immediately recognized it as the song-sparrow—"Prick yer finger, suck it, suck it well!"

Even the frogs sometimes seem to indulge a little in humorous or sarcastic ditties, for one sings out, "Jug o' rum! jug o' rum! jug o' dhrum!"—while another answers—"Paddy got dhroonk, got dhroonk, 'oonk 'nk!"

CORN.—The crop the present season will probably be enormous and prices low. An opinion, very generally expressed in different parts of the country, is, that at least double the usual quantity has been planted.

DAIRIES in England are always paved with stone or brick, and in warm weather kept constantly wet, so as to be equal to the spring houses of Ohio and Pennsylvania.

FALL AND WINTER PLOWING.

.....
 PLOWING late in the fall and during winter, may in some instances be beneficial; in others injurious. As a general rule, the principal reason that can be given in favor of the practice, is that the work is performed at a time of leisure, and the farmer is relieved from the pressure and hurry which would attend the crowding of all his plowing into a few days of spring. Loose gravelly and sandy lands are not, probably, injured by late plowing; but compact soils, if plowed in fall, are sometimes so beaten down by the heavy rains of winter and spring, that more labor is actually required to bring them into suitable condition for crops, than if they had not been touched till near the time of sowing or planting.

The idea that any thing is gained by the decomposition of sward by late fall plowing, is, we are convinced, a mistake. On the contrary, every one who has had the opportunity of observing, may have seen that sward which is broken up after the weather has become warm, and the grass somewhat started in spring, rots much sooner than that which was plowed in fall or winter.

But clayey soils, which have been well drained, may be greatly improved by fall plowing, if it is done in the right way. The ground should be thrown into narrow ridges, which should run in such a direction as will most readily turn off the water from the field. Let two furrows, as deep as can well be plowed, be turned together, in the form of what are called "back-furrows," and the whole field be plowed in this way. This will expose a large portion of the soil to the action of the frost and air. The ridges will be dry, and the soil being frozen and thawed while in this state, it will become loose and friable, and on cross-plowing the ridges, when the proper time arrives for seeding, the soil will be mellow, and in excellent condition for a crop. This course has produced good crops of grain and vegetables on land which would yield little or nothing in any other way.

Land which is overrun with couch-grass, may also be plowed in ridges in the fall to good advantage—especially if the soil is of a compact nature. The freezing of the roots will tend to weaken their vitality, and greatly facilitate the cleaning of the land, which should be done by a thorough fallowing, and working out the grass roots, which should be collected and burnt the next season.

NEW VARIETIES OF INDIAN CORN.

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 IN the Cultivator for 1845, page 28, is a communication from the late Judge DARLING, of Connecticut, in relation to a new variety of corn that he had produced, by mixing sweet corn with a very early variety. A sample of the new variety was forwarded to us, which was distributed to different persons in this vicinity, by whom it has been since raised. It proves to be a highly valuable kind on account of its earliness—ripening nearly a fortnight earlier than common sweet corn, and at the same time with the earliest Canada corn known among us.

Another instance of producing new varieties of corn by intermixture, has lately been made known to us. Mr. JOHN LOSSING, of this city, being on a visit to Kentucky in 1844, brought from Mr. CLAY's farm at Ashland a few ears of corn. It was rather a gourd-seed variety, similar to what is frequently met with in the region where it grew, having from twenty-four to twenty-six rows to an ear, the stalks growing from twelve to fourteen feet high, and requiring more time to ripen than our seasons generally allow. Mr. L., however, planted it as early as practicable in the sea-

son of 1845, and afterwards planted alongside of it some common eight-rowed sweet corn—planting the latter so late that it would come into blossom at the same time with the corn from Kentucky. When the corn ripened, he found the sweet corn more or less mixed, as had been expected, with the other. He picked out the sweet grains, which are easily told by their shrivelled appearance, and in the spring of 1846 planted them, at a distance from other kinds. The produce of that season more plainly indicated the mixture—the ears were generally larger than the former sweet corn, with an increased number of rows—some ears showed a preponderance of one variety, and some of the other. In 1847 he again planted by themselves the sweet grains from the largest and handsomest ears that were best mixed with grains of another kind. The result is that he has this year produced a kind of sweet corn having considerably larger ears than any sweet corn we have ever seen before; but having the general habit of growth as to size and height of stalk, and ripening at the same time that the old kind of sweet corn did.

The first year of these experiments, there was also a few grains of corn planted which were the result of a mixture of sweet corn and the large white Tuscarora corn. This was allowed to mix with the Kentucky corn in the same way that the other kind did. The produce of this is, therefore a mixture of three kinds—the Kentucky, the Tuscarora, and the Sweet. The same course in regard to planting by itself, was pursued with this as with the other kind, for 1846 and '47, and the produce the past season is quite uniform and distinct. The grains have the size of the largest Tuscarora corn, with the shrivelled character of the sweet, and a flecked or reddish tinge denoting the Kentucky cross.

Samples of the above kinds of corn may be seen at our office.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Oct. 20. 1847.

FLOUR—Genesee, per bbl. \$6.56a\$6.60—Ohio and Michigan, \$6.56a\$6.62.

GRAIN.—Wheat, per bu., \$1.40a\$1.42—Corn, northern, 75a 78c.—Rye, 90a93c.—Oats, 47a48c.—Barley 75a78c.

BUTTER—Orange County, per lb., 20c.—Western, dairy, 15a17 cents.

CHEESE—per lb., 6½a7½c.

BEEF—Mess, per bbl., \$11a\$12.—Prime \$7.75a\$8.25.

PORK—Mess, per bbl., \$14.87a\$15.—Prime, \$10.50a\$10.75.

HAMS—Smoked, per lb., 11cts.

LARD—Per lb. 10a11½c.

HEMP—Russia clean, per ton, \$225.

HOPS—First sort, per lb., 9a11c.

COTTON—New Orleans and Alabama, per lb., 9a12c.—Up-land and Florida, 9½a12c.

WOOL—(Boston prices,) Oct. 19.

Prime or Saxon fleeces, washed per lb. 45a47½ cts.

American full blood fleeces, 40a42½ "

" three-fourths blood fleeces, 34a36 "

" half blood do 32a35 "

" one-fourth blood and common, 28a30 "

REMARKS.—By the Cambria, which arrived at Boston on the 19th October, (she having left Liverpool on the 5th.) we have news of a further decline of flour in the British markets of about two shillings sterling per barrel. The news has, however, had no perceptible effect on our own market, and the demand is brisk at our quotations. Indian corn in England was in fair demand. The failures of English corn dealers have continued up to the latest dates, and the arrangements in commercial affairs are disastrous. The potato disease is much less virulent in the British Islands than for two previous years.

There is considerable demand for provisions, especially for pork and for butter.

BRIGHTON CATTLE MARKET, Monday, Oct. 19.

At market 1600 beef cattle, including 1950 stores, 14 yokes working oxen, 46 cows and calves, 5200 sheep and lambs, and about 3500 swine.

Prices Beef Cattle.—Extra, \$7.25, first quality \$6.75, 2d and 3d do. from \$4.50 to \$5.75.

Store Cattle.—Sales were not noticed.

Working Oxen.—Sales made at \$70, \$74, \$82a\$103.

Cows and Calves.—Sales noticed at \$16, \$19, \$22, \$26, \$30a \$42.50.

Sheep.—Sales of old sheep were made at \$1.75, \$2.33a\$2.237; lambs at \$1.63, \$2.12, \$2.23a\$3.

Swine.—At wholesale 4½a5½ for shoats; at retail from 5½ to 6½; old hogs, fat, at 5½ to 6c.; do. do. lean, 5c.—Boston Traveller

LIST OF AGENTS

FOR

"THE CULTIVATOR" AND "THE HORTICULTURIST."

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 Hobart, P. Kirkpatrick
 Harpersfield, R. B. Gibbs
 Hamptonburgh, D. T. Brown
 Hartford, W. E. Congdon
 Harpersville, J. A. Chafee
 Haltsville, J. Bander
 Hagaman's Mills, J. Miller
 Hartwick, L. Harrington
 Hartwick Seminary, H. Y. Goe-
 wey
 Homer, P. Barber
 Harford, Geo. A. Brown
 Hammond, A. P. Morse
 Howardville, H. McCallum
 Hanover, B. Tubbs
 Holland Patent, P. C. J. De An-
 gelis
 Hannibal, M. Wiltse
 Hamilton, P. Tompkins
 Houseville, H. C. Bush
 Harrisburgh, E. Cobb, Jr.
 Higginsville, I. F. Porter
 Hamilton, S. C. Griggs
 Hempstead, S. C. Snedecker
 Ithaca, J. M. McCormick
 Ilion, J. Dygott
 Ira, O. Clapp
 Junction, I. T. Grant
 Jonesville, R. K. Kennedy
 Jordanville, D. G. & W. B. Mix
 Jordan, Geo. A. Mason
 Jack's Reef, P. Drake
 Jericho, A. G. Carle
 Jamaica, Sam'l Mott
 Jamestown, Alfred Coffin
 Johnstown, D. B. Gady
 Jersey, P. M. Switzer
 Keeseville, W. Keese
 " A. Macomber
 Kennedyville, A. Shaver
 Kinney's Corners, W. Dean
 Kendall, W. Plocker
 Knowlesville, R. L. Hill
 Kingsbury, L. B. Armstrong
 Kingston, J. S. Smith
 Ketchum's Corners, T. Dunham
 Kinderhook, H. Blanchard
 Kiskaton, R. M. Lawrence
 King's Ferry, M. Hutchinson
 Kingsboro, C. D. Cobb
 Lansingburgh, Alex. Walsh
 Livingston, Dr. Trimble
 Leeds, J. Van Deusen
 Lexington Heights, Levi Bailey
 Levanna, W. R. Grinnell
 Litchfield, E. Combs
 Livonia, H. S. Clark
 Lima, N. B. Garnse
 Lysander, N. Hart
 Lafayette, E. V. W. Dox
 Leedsville, S. Pennoyer
 Lithgow, T. Cutler
 Liberty, J. K. Clements
 Luzerne, J. H. Wilcox
 Little Britain, Geo. Denison
 Lansingville, S. C. Lyon
 Leroy, B. W. Hand
 Laurens, S. Allen
 Lockport, H. W. Seoville
 Lyons, A. G. Percey
 Little York, P. Walrad
 La Grange, Wm. Potwine
 Leonardville, L. Hoxie
 Lowville, H. Mills for Lewis Co
 Lewis, L. Sherman
 Lee, David Brown
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 Livingstonville, J. Dutton
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 Marcy, H. E. Fox
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 Mattewan, Jos. Browe
 Madison, L. W. Curtis
 Morrisville, C. Morse
 Moreland, D. Nye
 Milltown, E. Hoyt
 Moriah 4 Corners, E. G. Harris
 Mixville, P. Dill
 Mount Washington, Jas. H. Hil-
 liman
 Mayville, R. Whiteside
 Manhasset, R. H. Titus
 Mamaroneck, J. I. Marshall
 Madrid, R. Blood
 Massena, U. H. Orvis
 Mount Vision, H. Shove
 Milford, L. Russell
 Macedon, S. D. Wilson
 Middle Granville, G. W. Porter
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 Marlboro, C. DuBois
 Middleburgh, L. Watson
 Moriches, J. M. Fanning
 Maria ville, N. Wiggins
 Manlius, R. Gilmor
 Mottville, H. Delano
 Mechanicsville, Geo. Burtis
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 Mohawk, L. Bellinger
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 Malden Bridge, S. Valkenberg
 Mellenville, J. Philip
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 Carpenter
 New Lebanon, Jonathan Wood
 " I. B. Churchill
 New Lebanon Centre, C. S.
 Dean
 Niverville, J. S. Doane
 North Chatham, J. N. Miller
 New Baltimore, W. W. South-
 wick
 Northumberland, B. B. Lansing
 Newport, R. Rice
 Norway, D. Dubois
 North East Centre, J. G. Caul-
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 New Hamburg, J. Van Wyck
 North East, W. Wakeman
 New Utrecht, G. Cowenhoven
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 North Harpersfield, W. Harper
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 Pierrepont Manor, J. G. Pease
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Salina, J. G. Buel
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Tyrone, S. H. Arnold
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Trenton, L. Guiteau, Jr., M. D.
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The Purchase, J. T. Carpenter
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Unadilla, S. Cone
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Voorheesville, Steph. Ostrom
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Walden, A. Hill
White Store, N. N. Green
Whitehall, A. Hall
Washington, D. B. Haight
Washington Hollow, D. Sands
Wappinger's Creek, H. A. Ma-sier
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West Sand Lake, Benj. Judson
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FRUIT TREES.

THE subscriber offers for sale, at his Nursery in Canterbury, Orange County, N. Y., a general assortment of the choicest varieties of Fruit Trees, embracing 110 varieties of Apples, at 25 cts.; 80 of Pears, at 50 cts.; 96 of Plums, at 50 cts.; 30 of Cherries, at 37½ cts.; 35 of Peaches, at 12½ cts.; 13 of Apricots at 25 cts.; 30 of Gooseberries at 12½ cts.; Hovey's Seedling Strawberries at 75 cents per 100 plants; Stoddard Seedling Alpine at \$1 per 100; Redwood, \$1 per 100; Boston Pine, 50 cents per dozen; Large Early Scarlet, 50 cents per 100; Raspberries of several varieties, 10 cents each. Also, 50,000 Seedling Stocks, embracing Apples, Pears, Plums, and Cherries.
CHAS. HAMILTON.
Cornwall, Nov. 1, 1847—1t.

ELEGANT RESIDENCE AND FARM FOR SALE.

SITUATED on the west shore of Cayuga lake, two miles south of Cayuga Bridge, in the town of Seneca Falls, Seneca Co. Farm contains 175 acres of first quality land. 130 acres improved and under cultivation, the remainder woodland. The buildings consist of a large two story brick mansion, with a rear frame building, also two stories high, wash-room and woodhouse attached. The main building has four rooms on the first floor, with a wide hall through the centre. The two front rooms finished for parlors, with marble mantels to the fire places. Four large bed rooms in the second story, with dressing-rooms and pantry. In the rear building is a large kitchen and dining-room for work people, with four bed-rooms in the second story; cistern and pump in wash-room—a good well of water near at hand. The out-buildings are a new carriage-house, barn, and shed. A board fence the whole front of the farm. Handsome ornamental and picket fences in front of house, enclosing a large lawn and garden. All the buildings and fences, with the exception of barn and shed, have been built and repaired within two years, and done with a view of permanent residence. The situation, as to variety and beauty of prospect and scenery, exceeded but by few if any in western New-York. There are large apple and peach orchards, of the best and choicest kinds of fruit. Also pears, plums, and cherries, of the finest quality. For further information as to price and terms of payment, with such description in addition that may be desired, application can be made personally or by letter, to the subscriber, on the premises. Letters addressed Oakwood Farm, near Cayuga Bridge, will have prompt attention.
JOHN OGDEN DEY.

Nov. 1, 1847.—1t.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's best two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—St. JAMES PLANT & Co.

A VALUABLE FARM AND COUNTRY SEAT AT PRIVATE SALE.

SITUATE on the Camden and Amboy Railroad, about 6 miles from Trenton, and 4½ from Bordentown, and within two hours of Philadelphia, and three hours of New-York by Railroad. It contains 190 acres, about 40 in wood and young timber, and 150 arable land, divided into fields of convenient sizes, and all enclosed with good fences. One hundred acres or more, and the improvements, will be sold at a fair price, if preferred by a purchaser, as it can be conveniently divided.

The improvements consist of a neat and convenient house, kitchen, and wash house attached, ice-house, tenant house, barn, hay house, stables, carriage house, sheds for cattle, sheds for carts and tools, corn crib, poultry yard, and other structures necessary to a large farm. The buildings are nearly new and in good order. Good water at the house, at the stables, and also in the fields. A garden near the house, and a beautiful sloping lawn in front of the house, well filled with trees; also two young Apple Orchards, a Peach Orchard of 2000 trees that will be in full bearing next season; Cherries, Plums, and a large variety of Pears. The fruit trees are of the finest varieties, selected with great care.

Price, \$75 per acre. Part of the purchase money may remain on mortgage.

Apply to GARRET S. CANNON, Esq., at Bordentown, N. J., or WM. H. GALTZMER, at Philadelphia, foot of Walnut-st. Nov. 1, 1847—1t.

AMERICAN EGG HATCHING MACHINE.

Patented Feb. 20, 1846.

AFTER 15 months of practical demonstration, the subscriber is enabled to present the above machine to the public with confidence, as an auxiliary to the wants of the farm-house. It is so simple in its construction and management, that a child can in a short time superintend its operations, with about an hour's attention during the day; and it requires no care after bed-time. Alcohol, or other high wines, is found to be the cheapest and cleanest fuel, and by repeated trials, the average expense of this kind of fuel does not exceed a quarter of a cent an egg, for the full term of twenty-one days. The chickens produced are healthy and strong, and their fine appearance has been the subject of general remark, among the many visitors (now) attending Saratoga. Full printed directions and explanations accompany each machine. The machines are durable, and can be sent with safety through any of the ordinary channels of conveyance.

PRICES.

No. 1, containing between 250 and 300 eggs, ..	\$20 00
" 2, " " " 500 and 600 " ..	30 00
" 3, " " " 800 and 1000 " ..	40 00

✂ Rights for towns, counties, or states, will be disposed of on very reasonable terms.

Reference, Editors of Cultivator.

L. G. HOFFMAN.

Albany, Nov. 1, 1847—2t.

I. T. GRANT & CO'S PATENT PREMIUM FAN MILLS.

THE subscribers, manufacturers of these celebrated mills, having enlarged their manufacturing establishment, hope to be enabled hereafter to supply promptly the rapidly increasing demand for that article. Their Fan-mills have taken the first premium at four of the New-York State Agricultural Fairs, at the State Fairs in Pennsylvania and Maryland, at the Fair of the American Institute, and at a large number of County Fairs, and secured the highest consideration at the great National Fair, at the city of Washington. They have been repeatedly tried, and the principle upon which they operate thoroughly tested by committees appointed for that purpose, and in every instance have been declared superior to any that have come in competition with them. They have never been awarded the second premium, and are the only mills manufactured, that will chaff and screen wheat perfectly clean (and at the rate of one bushel per minute) at one operation, taking out the chaff, cockle and smut at the same time. They will also thoroughly clean rice, and all kinds of grain and seeds by running it through once.

The materials, workmanship, and finish of these mills are superior to any in market. The bearings are all turned and finished so that a boy can turn them with perfect ease. We manufacture four sizes, (with seven sieves to each mill,) varying in price in proportion to size, and warrant them superior to any now in use.

We also manufacture very superior Grain Cradles, which have taken the first premiums wherever exhibited.

Our Fan Mills and Cradles are for sale at the following places:

John Mayher & Co., 195 Front-st., New-York.

E. Whitman, 55 Light-st., Baltimore.

Denslow & Webster, Savannah, Georgia.

Fitzhugh Coyle, Washington City.

J. W. Howes, Montpelier, Vt.

Luther Tucker, 10 & 12 Green-st., Albany, N.Y.

H. Warren, Troy.

I. T. GRANT & Co.

Junction P. O., Renss. Co., N. Y., Sept 1, 1847.—4t

HIGHLAND NURSERIES, NEWBURGH, N. Y.

A. SAUL & Co., (successors to A. J. Downing & Co.) beg leave to inform the patrons of this establishment and the public in general, that their stock of **FRUIT TREES** for sale for autumn planting, is full and complete, comprising all that is choice and rare of recent introduction, as well as a full and large assortment of all the leading standard varieties.

Their stock of **ORNAMENTAL TREES** being unusually large, &c., they would particularly call public attention to their stock of the following species, as being extra fine:

EVERGREENS.

Astrian Pines,	Norway Spruce,
Scotch do.,	Junipers—varieties,
Weymouth do.,	Arbor Vitæ, do.
Balsam Fir,	Yews, &c., &c.
European Silver Fir,	

DECIDUOUS ORNAMENTAL TREES

Horse Chestnut, Red,	Tulip Tree,
— White,	European Larch,
— Yellow,	Cucumber Magnolia,
Maple, Sugar,	Umbrella do.
— Silver leaved,	Oriental Sycamore,
— Scarlet,	European Mountain Ash,
— Norway,	Willow-leaved Oak,
— English cork-barked,	Weeping Willows,
Atanthus,	European Linden,
Catalpa,	Southern Cypress,
Weeping Ash,	American Elm,
European do.,	Scotch Wych do.
American do.,	English do.
Kentucky Coffee,	— Cork-barked do.
American Arbor Vitæ, for screens.	

Also Hawthorn, Buckthorn, and Privet Plants, together with a splendid stock of Osage Orange Plants for hedges.

A choice collection of Green-house Plants for sale in one lot or in parcels; for particulars see Horticulturist for September.

Catalogues sent gratis to post-paid applicants.

Highland Nurseries, Newburgh, Oct. 1, 1847.—2t.

10,000 Copies in Four Months.

COLE'S AMERICAN VETERINARIAN,

OR Diseases of Domestic Animals, showing the Causes, Symptoms, and Remedies, and rules for restoring and preserving health by good management, with full directions for Training and Breeding, by S. W. COLE, Esq.

This is emphatically a book for every farmer, and no farmer's library is complete without it. The demand for **TEN THOUSAND COPIES** in the short space of four months, speaks volumes in favor of the work. The farmer has in this neat and compact volume, a complete **ENCYCLOPEDIA**, in which he may find the whole subject of the Treatment of Domestic Animals, familiarly discussed, and rules and remedies fully and clearly prescribed.

Highly recommendatory notices have been received from many of the most distinguished Farmers and Editors in the country. The following short extracts show in what estimation the work is held.

[From Ex-Governor Hill of N. H.]

"Mr. Cole has shown himself well qualified for the compilation of this work. We understand that it has already had a free and extended sale; many times its price to almost any farmer, may be saved in its purchase."

[From J. M. Weeks, of Vermont.]

"The American Veterinarian is the best book of the kind I have ever seen. Every Farmer ought to have one."

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"We think no farmer would willingly be without this book after glancing at the Table of Contents."

[Albany Cultivator.]

"This will be found a useful book. It speaks of diseases under the names by which they are known in this country, and the remedies prescribed are generally within the reach of every farmer, and may frequently be found on his own farm. We second the suggestion that it should be in the hands of every farmer."

[American Agriculturist.]

"We recommend to all who keep Domestic Animals to procure Mr. Cole's new book. The lives of many valuable animals might be saved by following his directions."

The price of this valuable book, finely bound in leather, is 50 cents.

WANTED—50 active, intelligent, and enterprising agents, to sell this work, two in each State in the Union. A small capital of from \$25 to \$50, will be necessary for each Agent. Address, **JOHN P. JEWETT & Co.**, post-paid, the publishers.

October 1—3t. 23 Cornhill, Booksellers' Row, Boston.

FINE WOOLED BUCKS.

THE subscriber has for sale thirty superior Bucks, one and two years of age, of good size and form, raised from fine heavy fleeced ewes, of the Saxon and Merino varieties. These Bucks were got by Green Mountain Hero, whose last fleece weighed 10 lbs. 8 oz., thoroughly washed under a waterfall. The quality of his wool, as tested by sorting at the factory, was as follows:

Extra,	4 lbs. 3 oz.	3d quality 1 lb. 6 oz.
1st quality 1 "	13 "	4th " 0 " 10 "
2d " 1 "	4 "	5th " 1 " 2 "

These Bucks are numbered, and the subscriber has a record of the weight of their fleeces, also samples of wool from most of their fleeces.

EBENEZER SMITH.

Middlefield, Hampshire co., Mass., Sept. 7, 1847.—2t.*

GENEVA AGR'L FOUNDRY AND SHOPS.

THE subscriber has recently put in operation a new **FOUNDRY AND MACHINE SHOP**, intended chiefly for the manufacture of **AGRICULTURAL IMPLEMENTS**. A number of valuable improvements in various farming tools having been made and patented by his predecessor, (T. D. Burrall,) this establishment has been erected for the manufacture of these and such other implements as the market may require, and in order that purchasers may depend upon a genuine and well finished article. Among other things he has now on hand

Burrall's Patent Threshing and Clover Machines and Horse Powers

" " Shell Wheel Plows, greatly improved the present

season.

Burrall's Patent Corn Shellers, Nos. 1 and 2, do. do.

Also, Subsoil, Corn, and Shovel Plows, Straw Cutters, of various kinds, Scrapers, Plow Points, Trimmings, &c., &c.

He intends adding to his present stock from time to time, by selections from the best articles in market; all which will be got up in the best style, and sold, wholesale and retail, on reasonable terms.

Mill Gearing, Castings of all kinds, pattern-making, &c., &c., executed on short notice.

E. J. BURRALL.

Geneva, August 1, 1847.—4t.

SPANISH MERINO SHEEP.

FOR sale a few choice Merino sheep—bucks and ewes—of an doubted purity of blood, and a quality that will give satisfaction to purchasers. They can be sent west by canal, at the subscriber's risk.

R. J. JONES.

Cornwall, Vt., June 1, 1847.—tf.

PURE BRED RAMS.

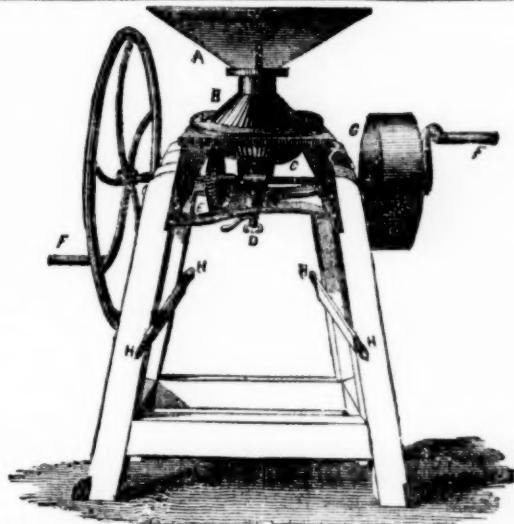
THE subscriber has a few choice rams for sale, bred from the celebrated flock of Geo. Flower Esq., of Albion, Illinois, and some from a Saxon ram imported by Henry Clay, Esq., of Ashland, Kentucky. These sheep are of fine healthy constitution, with a very fine long staple.

He has also added to his flock 20 ewes and rams, selected from the flock of Samuel Patterson, Esq., of Washington Co., Pa. These sheep are not surpassed by any in America; [see the communication of L. A. Morrell, Esq., Cultivator for Nov. 1846,] their wool having been sold last year in Northampton, Mass., at 75 cts.

He has also a few fine young Shepherds' Dogs, bred from a Scotch cully, imported by Mr. Mitchell, of Lasalle Co., Ill.

A. H. NICHOLS, Greencastle, Putnam Co., Ia.

August, 1, 1847.—4t.



JOHN MAYHER & CO.'S NEW SELF-SHARPENING CORN, COFFEE, AND SPICE MILL.

THE above cut shows the construction of our Premium Mill for Grinding Corn, Oats, Coffee, Spices, &c., &c. It is considered highly valuable for its simplicity of construction, durability, and its adaptation for farmers, planters, and grocers. It may be operated by hand or horse power, and will grind from four to five bushels of good meal per hour, and from 300 to 400 lbs. of coffee or spice per hour. Price, from \$25 to \$30. We also have for sale a smaller mill for the same purpose, which will grind from 1½ to 2 bushels of corn per hour, and from 90 to 100 lbs. of coffee per hour. Price, from \$5 to \$6.

JOHN MAYHER & CO.,

United States Agricultural Warehouse,

Oct. 3—1t. No. 195 Front, near Fulton-st., N. Y.

TAR PAINT AND LIME.

TAR PAINT for sale at the Albany Gas Works: A very cheap article for covering barns, &c.

LIME for sale at the Albany Gas Works, cheap.

Oct. 1—6t.*

GRANT'S PATENT FAN MILLS.

THE right to manufacture these celebrated mills can be obtained of the subscriber, at Junction P. O., Rensselaer Co., N. York. He also gives notice that he shall prosecute all persons who in any manner infringe upon his patent.

I. T. GRANT

Junction P. O., Rens. Co., N. Y., Sept. 1, 1847.—4t.

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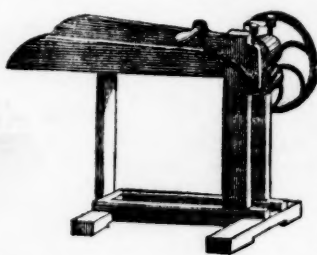
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HAY AND STRAW CUTTERS.



A LARGE supply of Stevens' Hovey's, and Towers' Cylinder Hay and Straw Cutters, constantly on hand at manufacturers' prices, at the Albany Agricultural Warehouse. When farmers learn the benefits to be derived from using cut feed, they will not be without a good machine.—Mr. A. Burlingame, of South Trenton, N. Y., used one the past season, and the value he places upon its use is found in

the following extract from a communication from him:—"With less hay to begin the winter, and thirty cows and four horses (in all 100 head) more than the year before, he saved over from five to seven tons of good hay, while the year before he was entirely out before grass came." The greatest saving is in using up all parts and kinds of feed, instead of running to waste. For sale at the Albany Ag. Warehouse, Nos. 10 and 12 Green-st.

L. TUCKER.

N. B. Descriptive Catalogues gratis, on application at the store, or by mail, post-paid.

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES, FLUSHING.

WM. R. PRINCE & Co., successors of Wm. Prince, and sole proprietors of his great collection of Fruit Trees, &c., have just published their *NEW DESCRIPTIVE CATALOGUES*, 36th edition, which will be sent to post-paid applicants—to purchasers gratis, and to others at \$1 per sett.

TO NURSERIES.—In addition to other trees we have an immense stock of Ornamental Trees and Shrubbery, including 50,000 Evergreen Trees, suitable for Nurseries; they being of the various sizes best suited for transmission to a distance, and for forming Nursery plantations. Also, 60,000 Peaches, of choice varieties, at low rates, and 30,000 Cherries, at much reduced prices. Nov. 1, 1847.—1t.

COOKING STOVES, &c.

THE subscribers offer for sale at low cash prices, the following Stoves, &c.:

Mott's Air Tight Cement Ovens, 3 sizes.
" Pride of the Kitchen.
" Ring Cylinders, 3 sizes, for Bar Rooms, &c.
" Agricultural Cauldrons, from one-half barrel to four barrels, at the manufacturers' prices; Wager & Dater's Improved Air Tight, large oven, summer hearth Cooking Stoves, 5 sizes; Wager & Dater's National Air Tight Cooking Stoves, 4 sizes; Air Tight Parlorwood and coal Stoves; Sheet Iron Dumb Stoves; Parlor, Cook, and Premium Stoves. All kinds of Tin, Copper, and Sheet Iron Ware, on hand and made to order at short notice, at VAN WORMER & MCGARVEY'S,
No. 14 Green-st, Albany.

Nov. 1.

SYRACUSE NURSERY.

THE subscribers would call the attention of the public to their extensive and well selected assortment of Fruit and Ornamental Trees, consisting of

200,000 Grafted Apple Trees, from 1 to 5 years' growth, 60,000 of which are from 6 to 9 feet high; 3 to 5,000 of the celebrated Northern Spy, 4 to 8 feet high, can be supplied without extra charge to those ordering other varieties.

6 to 8,000 Pear Trees, 4 to 7 feet high.
A few hundred of the Onondaga, and Van Mon's Leon Le Clere, (very thrifty,) can be supplied, of one and two years' growth, from 50 cts. to \$1.00 each.

1,000 Cherry Trees, 6 to 9 feet high.
10 to 15,000 Peach Trees, of the best early varieties, thrifty and free from disease.

Apricots and Nectarines, a good supply.
3 to 500,000 Apple Seedlings, from two to three years old, and unusually large.

Also, a large quantity of Horse Chesnut, Ailanthus, and Mountain Ash, of extra size, and good form, together with all the desirable varieties of the Grape.

All post-paid communications and orders containing remittances, promptly attended to. THORP & SMITH.
Syracuse, N. Y., Nov 1—6t.

RURAL PUBLICATIONS.

THE CULTIVATOR, a monthly journal of Agriculture, Horticulture, and Domestic Economy, published at Albany, N. Y., by LUTHER TUCKER. Single copies \$1 a year. To Clubs or Agents, seven copies for \$5—Fifteen copies for \$10, and at the rate of three copies for \$2, for all over 15 copies. This work has now been published fourteen years, with a constantly increasing popularity among the farmers of every part of the United States. The volume for 1848, will commence on the 1st of January, at which time all subscriptions for the year should commence.

THE HORTICULTURIST, and Journal of Rural Art and Rural Taste, a monthly magazine, edited by A. J. DOWNING, Esq., of Newburgh, well known as the author of "Landscape Gardening," "Cottage Residences," "Fruits and Fruit Trees of America," &c., and published at Albany, by LUTHER TUCKER, price, \$3 a year—20 per cent discount to Agents. The first vol. of this work was completed with the June number for 1847, and with the back numbers of the 2d vol., now in course of publication, can be furnished to all new subscribers. The Horticulturist embraces in its scope, the Description and Cultivation of Fruits and Fruit Trees, Ornamental Trees, Shrubs and Plants—Designs for Rural Cottages, Farm Houses, Lodges, Ice Houses, Vineries, &c.—Landscape and Ornamental Gardening, and all matters of interest to the horticulturist, and should be in the hands of all who desire to enrich and beautify their residences by the comforts and adornments of rural art and rural taste.

Postmasters and others having a taste for rural pursuits, and disposed to aid in circulating correct information upon rural subjects, are invited to act as Agents for the above publications. All letters to be addressed to LUTHER TUCKER, Publisher, Albany, N. Y.

BURBANK, OR MORGAN CHIEF.

I HAVE on hand and will sell, a stallion horse, known by the above name. He is of a beautiful chestnut color, 15 years old, sound and smooth as a colt—weighing 1050 lbs. He was raised by Peter Burbank, Esq., of Wells River, and was got by "Old Woodbury or Burbank Morgan," owned at one time by Mr. Burbank. His dam was a Morgan mare known by the name of "Empress" and owned also by Mr. Burbank.

His sire and dam were both got by the original Justin Morgan horse, making him the highest Morgan blood stallion known to be living excepting "Old Gifford" Burbank or Morgan Chief, was sold by Mr. Burbank's administrator to B. Latham, of Lyme, N. H., when a yearling, for \$150, and by him kept until May, 1843, when he was repurchased and taken back to Wells River, and there remained until the present season. He has proved a sure foal getter and an excellent stock horse. He is the sire of the fast trotting chestnut mare, belonging to W. S. Marland, of Andover, Mass., for which he has refused \$500; also the chestnut gelding sold in Boston, by Pushee of Lebanon, in the spring of 1846, for \$500, and now kept at the Devonshire stable, and many other valuable and high selling horses. He is a kind, valuable driving horse in all harness, is afraid of nothing, and is perfectly manageable by any person. C. BLODGETT.

Chelsea, Orange Co., Vt., Oct. 8th, 1847.—1t.*

THE CULTIVATOR

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Of whom single numbers, or complete sets of the back volumes, can always be obtained.

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